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FEBRUARY, 1951

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Your Company and the A-Bomb

Are You Working Too Hard?

Some Business Speech Problems

Effects of Noise on Office Workers

How to Get Listeners

Today's Typical Working Woman

Meeting Today's Recruitment Problems

Gearing Production to Demands Ahead

Inventory Is an Investment

What Will Make Salesmanship a Profession?

New Techniques in Annual Reporting

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330 WEST 42nd STREET • NEW YORK 18, N. Y.

M. J. DOOHER, *Editor*; VIVIENNE MARQUIS, *Associate Editor*; EVELYN STENSON, *Digest Editor*;
HELEN F. HOUGH, *Assistant Editor*

THE MANAGEMENT REVIEW is published monthly by the American Management Association at 330 West 42nd Street, New York 18, N. Y., at seventy-five cents per copy or six dollars per year. Vol. XL, No. 2, February, 1951. Entered as second-class matter March 26, 1925, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

Changes of address should be forwarded to the publishers *one month in advance*, and postal unit numbers should be included in all addresses.

The object of the publications of the American Management Association is to place before the members ideas which it is hoped may prove interesting and informative, but the Association does not stand sponsor for views expressed by authors in articles issued in or as its publications.

An index to THE MANAGEMENT REVIEW is published annually with the December number. The contents are also indexed in the *Industrial Arts Index*.

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The Management Review

VOLUME XL No. 2

FEBRUARY, 1951

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General Management

Your Company and the A-Bomb

YOUR COMPANY will probably never feel the impact of the atom bomb. Even if war erupted and Russia subjected this country to an atomic attack, the chances of any particular United States firm's being damaged are slight. But the problems that would arise if a bomb did hit are so enormous that no alert management can afford to ignore the implications.

Your approach to the problem calls for sound judgment above all else. This is easier said than done—there's been so much irresponsible theorizing that it's harder and harder to maintain a clear perspective. Your best course is first to understand thoroughly just what you face, then (in the light of that background), determine your vulnerability. Next, appraise carefully what rights the government will give you—and what duties you will owe the government. Finally, proceed with those concrete measures which seem most necessary to protect your interests in view of your vulnerability, rights, and obligations.

Any atom-bomb attack on industry would probably come from the air and be made by enemy planes. The best thinking of U. S. defense experts today holds that an A-bomb *could* be dropped on a U. S. target . . . but only under the following conditions: (1) Accuracy would be low. Pinpoint delivery is unlikely. (2) Surprise element would be dominant. (3) *One-shot attack most likely.* As things now stand, the type of A-bomb most likely to be used would probably contain the power of 20,000 tons of TNT.

Damage varies with the altitude at which the bomb is exploded (the

"AZ" in Atomic Energy Commission lingo) and the distance from the point directly under the burst (the "GZ"). Assuming an AZ of 2,000 feet—the ideal for destructive effect—it's reasonable to plan in terms of the following: up to one-half mile from GZ—total destruction; between one-half mile and six miles from GZ—heavy damage.

Thus you should concentrate now on plans which might be useful in the event that your plant is one to five miles from the blast center. This means your precautions should be mainly geared to counteract *indirect damage*, e.g., that due to falling debris, fires spreading. *Three types of damage* will be caused by any A-bomb landing on a U. S. target:

Blast. In a bomb attack, pressure builds up instantly—5,400 lbs. per sq. ft. at 1,000 feet from the blast center, 2,400 lbs. at 3,000 feet, 1,100 lbs. at 1 mile, over 250 lbs. at 2 miles. Against these figures, the average office building floor is designed to support only 75-100 lbs. per sq. ft., the average warehouse 150-200 lbs.

The situation obviously calls for extra strength in all shoring, shielding and bracing measures you take in the protection of your property and equipment.

Fire. There's double danger here: fire from the initial flash ("thermal radiation"), and indirect fire, compounded by lack of water due to broken pipes, destruction of municipal fire-fighting apparatus, etc.

Protection against fire effects of an A-bomb should center on developing as self-contained a fire-fighting unit as possible.

For publishers' addresses or information regarding articles or books, apply to AMA headquarters.

Radiation. A big source of casualties, but its effect on buildings and equipment *has been greatly exaggerated*. At both Hiroshima and Nagasaki, Japanese rescuers found that within a few minutes after the explosion they could go anywhere in the damage area at no personal risk.

How vulnerable are you? You're in little danger if you're located in an area: (a) where the concentration of industry is less than five square miles, or (b) where the urban concentration is less than 50,000 people. An A-bomb attack on such an area would probably be too expensive, unless it contained specific installations of key importance to national defense (for instance Oak Ridge). If your company is in a heavily industrial or thickly populated area, you may get hit. Your danger is greatest if in a large urban area—not because you're more likely to be a target but because damage is likely to be worse.

Your vulnerability also hinges on your dependence on utilities that are likely A-bomb targets. Even if you're in a safe location, miles from the scene of a blast, you're vulnerable in a very real sense if you depend on a single railroad or source of power (say a hydroelectric dam) which may be-

come an enemy target. If you do, start planning now on *alternate* sources of power, *alternate* methods of getting the materials you need, *alternate* transportation facilities to deliver your products, etc.

Draw a three-mile radius circle around your facilities. Then, list everything within this circle that you think would interest an enemy strategic bombing command. It may not be possible to spell out exactly what items other plants within the circle would make in wartime, but the general information available to you should give you a good slant. Write to your State officials to find out whether your company is located in any of the 150 Critical Target Areas that happen to be in your State. The list as a whole is confidential, but State authorities are permitted to reveal any areas designated within their own jurisdiction. On the basis of your study, you can then tell what precautions to take—whether it's urgent to relocate certain key operations—whether to delay any further expansion in your present location.

But remember to work together with the rest of the community. Only then can U. S. business face up to the possibilities and implications of the A-bomb with real confidence.

—From *Your Business and the A-Bomb*. Policy Memorandum of December 20, 1950. Research Institute of America, Inc., 292 Madison Ave., New York 17, N. Y. 25 pages.

What Kind of Security for Business?

A WIDESPREAD DEMAND for security has become the economic cry of our times. Labor has found that it needs—and is getting—its pensions, welfare funds, minimum pay rates, high wage contracts. The farmers believe they need—and have received—price sup-

ports for their crops, acreage allotments, and storage facilities. But what about business, the third great partner in the economy? Its spokesmen have been somewhat late in saying so, but now business, too, needs security—to re-

main in business, to compete, and to expand.

Today's emergency highlights this need, particularly the need for security in order to expand. On the one hand, military requirements demand a mounting share of production and national income. On the other our rising population figures indicate we'd better make plans to step up our economy if we hope to maintain our standard of living.

Since 1945, the lion's share of business income after taxes has been used by most firms for the basic and all-important purpose of staying in business and, where possible, expanding. Thus business' \$80 billion postwar expansion owes itself mainly to those gaudy profits we've heard so much about. "But why," ask the critics of business, "need profits be so high? Why doesn't business finance modernization and expansion by more outside borrowing or by going into the money market to raise new equity capital?"

The answer is: Business would if it could, but it can't. Consider these facts: Using 1935-39 as a base, the business man's dollar, which was worth 109.4 cents in 1939, now buys only 45 cents, worth of raw materials, building construction, and labor.

Is it possible to finance today's costs principally by raising new equity capital? The experience of the past half decade says no. In the first place, things have tightened up for that part of the population which normally invests its savings in business. After the Internal Revenue Bureau's mowing machine has gone over the field of potential investors, pickings for industrial financing are few. In the second place, people have changed their investment habits. Today's would-be investor wants safety, not risk. Finally, the very magnitude of our economic expansion seems to be outrunning the equity capital market. At the present time, if every cent of personal savings were to

find its way into business investment channels, industrial financing would still have to search elsewhere for about two-thirds of its funds.

Well, persist the critics of business profits, how about more borrowing through bond issues or loans from banks and insurance companies? The trouble is that bonds and bank loans demand interest payments and eventual liquidation of the principal whether the ink on a company's books is black or red.

To be sure, around one-fifth of industrial financing does come from borrowing. But business is leery of increasing that proportion. Today, in boom times, about seven cents in the average sales dollar can be reckoned as profit; for smaller firms, the percentage is lower. Heavy borrowing now, even at the market's low interest rates, would slenderize profit margins beyond any critic's concept of common sense. Therefore, if the economy is to expand, financing that expansion calls for sizeable undistributed profits—and therein lies a danger.

Today, military requirements are on the way up. Taxes have already begun reaching for the stratosphere, and as they rise they will inevitably cut down the ability of private enterprise to carry out necessary expansion without Washington stepping in to direct the job.

Thus, under present conditions, it may not take a full-dress mobilization for the United States to drift away from a free enterprise economy into one that's government-managed. It is not necessary, but it can happen. Whatever way we choose, the cost of rearmament will have to be paid for by taxes—including, of course, heavy corporate taxes on profits. But let's remember that if we are to preserve and stimulate the vigorous growth that has characterized our economy under private enterprise, we must foster security for business.

—PETER R. LEVIN. *Steelways* (American Iron and Steel Institute).

Choosing the Right Business Consultant

THE DECISION to use the services of a business consultant brings up many problems for management. Not the least of these is the choice of the right consultant for the job.

To find out how management goes about selecting its consultants, the Controllers Institute recently surveyed 61 of its member companies with home offices located in 25 cities of New England, New York and the Middle West. Here are some of the survey findings.

In most cases, recommendation played an important part in management's decision to employ a particular consultant. Typically such recommendations were not detailed or directly related to the company's problem. The recommendations came from such sources as members of the company's management or its board of directors; clients of the consultant; outsiders such as business friends or educators; business and trade associations.

In many cases, a particular consultant was chosen because the company had employed his services on previous occasions with satisfactory results.

In the cases where a public accounting firm did the consulting work, usually the accounting firm chosen was the company's regular auditor.

In several cases studied, the consultant was chosen solely on the basis of a sales presentation to the company by a salesman or a partner of the consulting firm. Often this person was not active in the assignment.

Many executives are dissatisfied with these bases for choosing consultants for a number of reasons:

1. Often the recommendation of a particular consulting firm by individuals is predicated upon friendship and personal, rather than business, acquaintance. Such recommendations may not therefore give a satisfactory

guarantee of good work by the consultant.

2. The recommendations of past clients are unsatisfactory, since only the names of satisfied clients are given to a prospective client by the consultant. Unless the prospective client is familiar with the recommending company or its executives, it is impossible to evaluate the recommendation.

3. Recommendations by business and trade associations are weakened because the association's staff is not usually familiar with the company's problem. In some cases the recommendation may be made by members of the staff who have had no business experience. In addition some consulting firms are members of these associations and consequently the association is under pressure to recommend member firms.

To overcome the weaknesses of some of the existing procedures for the choice of a consultant, the following criteria are suggested:

General Reputation: Does the consultant have a reputation for getting the job done well and quickly? Are its members courageous enough to speak their minds? Are they tactful enough to express their views effectively?

Consultant's Staff: Does the consultant have a sufficient staff of trained people to assign to your problem? Does the consultant have the staff to discharge your assignment at the required levels in your organization?

The study indicated how vital it is that management assure itself that the consultant has a trained, competent staff available for assignment to the problem at hand.

Cost to the Company: Is the consultant willing and able to give you what seems to be a reasonable estimate of the total cost of the job? Do his past clients report that their jobs

were done within the original cost estimates made by the consultant?

The ability of a consultant to estimate the cost of a job is an indication of his experience in the task to which he is to be assigned and thus is significant to management in choosing a consultant.

There is real danger in "shopping" for a consultant on the basis of the lowest cost to the company. In the cases in which the lowest cost estimate was the major criterion for selecting the consultant, there was strong evidence of an unsuccessful experience.

Consultant's Credit Rating: Does the consultant have a satisfactory credit rating?

Investigation of the consultant's credit standing will inform management as to whether the consultant pays his bills. Of course, a poor credit rating should be a danger sign to the company, but a satisfactory rating does not of itself signify a competent consultant.

Method of Securing Your Business: Are you satisfied with the manner in which the consultant went about securing your business?

The manner in which the consultant goes about securing the client's busi-

ness is often a useful hint as to how the consultant and his representatives will conduct themselves during the course of the assignment.

Several companies reported that they had chosen their consultants because of high-pressure sales solicitations only to discover that the consultant oversold the organization on himself and his recommendations after he had been retained.

Other firms stated that when the choice was based on an honest give-and-take between the prospective consultant and management, satisfactory relationships developed.

Consultant's Purposefulness: Does the consultant have a reputation for "sticking to business" or does he tend to "wander off to other problems"?

Definition of the Problem: Does the consultant prefer to work under a clear definition of his assignment?

Specialization of the Experience of the Consultant: If the problem requires a competent knowledge of your industry, does the consultant have extensive experience in your industry? If the problem requires competent knowledge of a business function, does the consultant have extensive knowledge of and experience in that function?

—From *Business Consultants: Their Uses and Limitations*. Controllership Foundation, Inc., 1 East 42nd St., New York 17, N. Y., 1951.
32 pages. \$3.00.

Are You Working Too Hard?

HAVE YOU EVER said to yourself, "Gosh, nothing but work, work, work. This job is killing me. I am just working too hard."

Once in a while isn't too bad, but if you have formed the habit of saying this, or something similar, frequently you are really making a hard thing of your job. You are building up mental resistance that actually results in making your work hard. Eventually you

find yourself off balance. Every job is too hard; each day's work is too difficult; every problem adds its weight.

Such resistance tightens up a man—physically and mentally. It creates tension and that in turn creates hard working habits. It's a vicious circle. You think the job is hard, you set up resistance to the thought of it, you become tense, and presto, the job

really is hard. You've come back in the circle to the starting point.

Ever watch a professional golf player? Watch him relax and release tension before he swings at the ball? He gets results by swinging his club in an easy, relaxed manner. The dub golfer, however, makes a hard job of the game. He swings at the ball with all his might—nearly jerking himself off his feet. He does a lot of work with little results. The professional swings with ease and hits the ball 250 or 275 yards—all by not working at it too hard.

"Look fellow—take it easy," said a doctor to one of his patients. "When you sit at your desk, making notations on a paper, you're supposed to be working with your *brains*, not every muscle in your body."

The chap in this case really worked hard at his job. When he was on the telephone, he screwed his face up in dozens of lines in concentration. When he wrote a notation he scribbled like fury—every muscle in back and shoulders tense. When he talked about a job in process, he sat with his feet twisted around the legs of his chair, his hands grasping the arms, and his teeth clenched on his pipestem. When he worked, he really worked every second of the time. And that was why he was in the doctor's office!

The chap who constantly talks about how hard he works, is bragging about his *bad* habits—not his good ones. He concentrates so hard on how hard his job is that even at night, instead of getting his sleep, he lies there think-

ing about how much there is to do the next day. After this goes on a few weeks, such a person is in a rut—a deep rut. And the work still has to be done, for he actually hasn't accomplished much. Moreover, the spring is gone out of his actions or movements. He just moves doggedly along. He has lost his "spark."

Forget how hard the job is—organize it. Use some of those hours spent worrying at night to PLAN for the next day. Then relax and sleep.

Next day, check the plan against new orders or procedures which may have come up, revise it here and there, and get going. With a plan set up, part of the difficulty is solved, and with the work under way, there will be time throughout the day to relax and plan the next operations.

The next move: DELEGATE. The supervisor who cannot delegate some of his responsibilities is going to rush through every day, wondering how he can get everything done. One of his primary jobs is that of developing others to handle responsibility.

One habit that makes work doubly hard is mulling over mistakes. Man is human and mistakes *will* occur. To lose energy stewing over every little mistake made in a department is to dissipate one's energies where they will do the least good. The supervisor who can understand and evaluate such mistakes, consider them in proportion to the whole job, and then charge them off is conserving his energy for the day's work.

—*Industrial Relations: A Dartnell Management Service* (The Dartnell Corporation, 2660 Ravenswood Ave., Chicago, Ill.)

HOW BIG, REALLY?: How much has U. S. output in real goods grown since 1929? The Department of Commerce recently announced the gain: 75 per cent—less than half the increase shown by dollar figures, largely because of the drop in the dollar's purchasing power. To make its computation, the Department picked 1939 as a reasonable norm between prosperity and depression, and used that year's purchasing power of the dollar as a base. But, even on the adjusted basis, reported Commerce, the output of real goods in 1950 increased 7 per cent over 1949—"a more than average gain."

—*Time* 1/29/51

How to Work in Comfort

BUSINESS, government, and labor got together in Washington recently to discuss improving working conditions in offices and plants. In week-long sessions held at the Library of Congress, they listened to the nation's top experts tell about the various fields of environment that affect working conditions—illumination, color, noise, ventilation, and safety.

Here are some highlights of the discussions:

Seeing conditions (the experts preferred this term to "illumination") embrace, in addition to illumination, the brightness of the entire surroundings, tasks, light sources, fixtures, windows, and intermediate surfaces.

Some approaches to better seeing conditions:

(1) Use dull-finished paper and work materials and non-glossy ink.

(2) Light-colored desk tops are preferable. Best types are natural woods, plastics, or dull metal. Natural walnut and mahogany are bad—particularly with glass tops.

(3) Light levels of not less than 30 footcandles are recommended. For general office work they should be closer to 50 footcandles, for critical and exacting assignments, up to 100 footcandles.

Use of *color* should be functional, rather than decorative.

When the eye is confronted with dull colors, it opens up. When brightness enters, the pupil contracts. Since this action is muscular, the eye becomes fatigued when there are too many differences in light and dark. No surface in an area should be more than five times as bright as any other surface. A white wall reflecting about

85 per cent of the light that hits it sets up a poor background for a black machine that reflects only 5 per cent.

A good yardstick: (1) Ceilings should be white for maximum light reflection; (2) floor should be as light as practical with a reflectance of 15 to 30 per cent; (3) fixtures and equipment should reflect from 25 to 40 per cent; (4) walls should reflect between 50 and 60 per cent.

Yellow-orange, red, and red-orange are easy to see and are good in marking hazardous equipment.

Warm lights are preferable to cold lights, which create the illusion of coolness and unfriendliness.

Wrong use of color may distract and compete for attention.

Bright and warm colors tend to condition the human organism for muscular activity.

Cool colors and dim lights are conducive to introspection, to sedentary tasks, to mental activity.

Noise can be eliminated through two approaches. The first is actually to remove or reduce noise in equipment. The second is to reduce noise through layout. It's unwise, for example, to concentrate typing in one central point. The distraction resulting cuts efficiency. Drapes, floor coverings, acoustical ceilings, enclosure of noisy equipment, all help reduce noise.

Year-round air-conditioning helps preserve books and records and improves the performance of business machines using paper cards.

When there is adequate filtration in offices, records may be kept in open racks instead of in filing cabinets, which will result in a great saving in space and cost.

—*Business Week*, November 18, 1950, p. 108:3.

IN A RECENT nationwide Psychological Corporation survey on the question of corporate size, respondents said big firms should be: encouraged (48 per cent); let alone (25 per cent); watched (11 per cent); broken up (2 per cent); 14 per cent were uncertain.

Some Everyday Business Speech Problems

FRANKLIN H. KNOWER

The Ohio State University

MUCH is being said or written currently about the importance of effective communication in business, but there still remains a vast field for research on the subject. The writer has the problem of supervision of a course of instruction in the Columbus, Ohio, area in which most of the students are enrolled in a college of engineering or commerce. It has seemed appropriate therefore to do more than merely speculate or accept an occasional person's expressed opinion or experience on the subject.

This report concerns some preliminary studies of more extensive research under way on these problems. This preliminary research was concerned with such questions as the extent to which business men feel skillful speech to be important in business and social affairs, for whom it is particularly important, some types of skill of special importance, types of problems most frequently experienced, and some aspects of speech skill most frequently recommended for business men.

The data have been derived primarily from 158 replies to a questionnaire sent to the directors of personnel training programs in some major Ohio industries. These men, it was assumed, are in a position to observe and judge the value of effective speech to the business man. Some of the data are derived from 1,088 interviews with citizens in many occupations, mostly business, in 48 Ohio counties.

Speech is reported as receiving some consideration in the employment of supervisors and executives by 86 per cent of the personnel men, and in the employment of wage earners by 17 per cent. Ninety-three per cent of

the citizens reported that speech is important in their occupation. Ninety-one to 93 per cent of the training directors recognize that the welfare of the companies they represent is influenced by the speech skill of most or all of their supervisors or executives. Few consider company welfare influenced by the speech skill of wage earners.

The types of speech skills particularly recommended for supervisors include ability to give effective demonstrations, oral explanations, interviews and conferences, and inspirational talks. Executives need these skills and also skill in making public relations talks to groups outside the company. Citizens asked to report on speech difficulties they have experienced and observed in others most frequently report personal difficulties in such areas as language, confidence, developing and organizing ideas, defending convictions, and participating in such formal aspects of speech as parliamentary procedure and the work of a chairman. They observe others to have difficulty in developing confidence in use of voice and language, and in such social aspects of speech as tact, the ability to be a good listener, and not talking too much. It is interesting to note here that speech difficulties are observed in others even more frequently than they are experienced. This finding supports other studies which indicate that many people are not good judges of their own speech skill.

Aspects of communication particularly recommended by personnel training directors for training supervisors include development of tact, ability to think more clearly, better

use of language, greater ability to listen, and more poise and confidence. The recommendations for executives are similar, though the development of confidence is less widely needed by this group, and there is a somewhat

greater comparative demand for more flexibility in adapting speech to different situations. It is apparent from these data that speech training programs in industry should give strong consideration to the psychological and social basis and processes of speech.

A Managerial Code

MANY PROBLEMS that arise in industry may be anticipated and solved before they happen by an executive who has managerial greatness. Here is a suggested code that will help business men achieve such greatness, offered with the intention that each individual should draw up his own particular variations to meet his own specific problems and needs:

1. Meet and know your men. Don't be a chair-sitter.
2. Try to see problems as the worker sees them.
3. Be fair and don't play favorites.
4. Think and speak in terms of us and we, not I and you.
5. Outline objectives; avoid "deep dark secrets."
6. Loosen up on the praise, tighten up on the criticism.
7. Accept responsibility; step ahead; get out of the rut.
8. Broaden your viewpoints. Don't let your education exceed your intelligence.
9. Be slow to reverse a decision but quick to admit and to correct a fault.
10. Work with, not over.

Perfection in managerial duties will never be reached. Surely, though, the manager who constantly tries to improve personal relationships with his employees and strives to make use of past and present experiences to improve those of the anticipated future, can reach out and at least touch managerial greatness.

—Trained Men

A Lesson for Business Men

WE HEARD RECENTLY of a man who collects etchings. He lives in an apartment of modest size, and early in his experience as a collector he arrived at the end of his wall space. He found that he could hang just 15 etchings, if they were to be displayed to advantage. This irked him, for he did not want to stop collecting. But neither did he want to accumulate etchings that he could not see and enjoy. One day the solution came to him. He would limit himself to 15 etchings—but keep bettering his collection. From then on, when he bought a new etching he disposed of one of the others—sometimes selling one for more than he had paid.

This principle might be adopted with profit by business men in "collecting" outside responsibilities, such as the leadership of organizations, committee chairmanships, directorships, and the like. It behooves all of us to carry our share of the responsibilities of life and business; but there is a limit to what a man can take on and discharge with credit. When he finds himself carrying all he feels he can manage efficiently, and with justice to himself and his family, he might wisely invoke the etching collector's philosophy of not taking on any new responsibility without dropping one. Thus he can keep his life fresh and useful without overburdening himself.

—Management Briefs (Rogers & Slade)

Office Management

Noise and Its Effects on Office Workers

IT WAS long believed that the intensity level of the over-all noise in an office determined whether that office was a comfortable place to work. Research studies in the last few years have shown, however, that while the ambient noise level is a factor, it is definitely subordinate to the annoyance factors of frequency distribution, duration, lack of directivity, and irregularity of the sounds that make up the over-all noise. Creating a comfortably quiet office environment is not only a matter of the number of noise sources, but rather the characteristics of the noise from those sources, the layout and location of the noise-making equipment, and finally adequate control of reverberation within the room.

About 20 years ago a project was undertaken at Colgate University to investigate the reactions of normal individuals to noise. This study disclosed that people react to noise and fear in about the same manner. In short, the inward disturbances resulting from noise are of the same nature as those generated by fright.

A direct relationship between exposure to noise and fatigue was disclosed when the actual energy required to do the same type of work in a noisy and a quiet office environment was checked. Measurement of caloric energy expended by office workers showed that in the case of typists, 19 per cent more energy went into the work in the noisy room. This extra effort was continuous throughout the full work period, and not only during the initial hour or so while the subjects became adjusted to the noise, as might be believed.

This same study also produced an explanation as to why we all instinctively prefer a quiet place to eat. It was

learned that noise has a direct effect upon stomach action and also decreases the natural flow of saliva.

The results of experiments at New York's Bellevue Hospital give us some understanding of what happens to the brain in the presence of noise. The simple action of popping an inflated paper bag increased the brain pressure several times. This pressure increase took place in every instance—whether the subject was expecting the explosion or whether it came unexpectedly.

Some investigations in England have indicated that the size of the fingers, legs, and arms shrink as a result of exposure to noise. This action is probably a related effect to the automatic muscular tension which, studies show, is induced by noise.

During World War II, surveys made among employees who worked in noisy environments every day offered a somewhat new concept of the noise problem and where to begin in dealing with it. The employees' analysis of an objectionable noisy environment can be summarized as follows:

1. It's the commotion caused by the "other fellow" that is annoying.
2. If a person can't talk easily—or hear readily—without strain, the place is uncomfortably noisy.
3. Sounds that "crowd" in on people from unrecognized or not easily located sources make them nervous and jittery.
4. Sounds coming from distant sources without expected diminution, are very irritating.
5. Intermittent sounds, noises cutting in and out of the over-all level at unexpected times are worse than continuous sound.

It has been assumed that a sound or noise of a given "loudness" *would* and

did affect people in a more or less consistent way. The worker judges a sound to be loud only as it is related to the foregoing factors. He is not particularly interested in decibels—he is interested primarily in freedom from annoyance and distraction.

It is readily seen from this that human reactions, rather than the sound level meter, determine the “noisiness”

of an office. It is possible to be most uncomfortable in an office where the noise intensity level is considerably under that known to be hazardous from the standpoint of impaired hearing, and likewise, it is possible to be quite comfortable, so far as annoyance is concerned, in an environment having noise intensity levels close to the danger line of auditory damage.

—From an address by R. ALLEN WILSON before the Library of Congress.

Is Your Red Tape Made of Paper?

RED TAPE is an unnecessary obstruction to the accomplishment of a legitimate objective. Such an obstruction consists of minor details or routines—unnecessary practices which creep into the path of legitimate effort and slow its momentum.

In many office operations, there are serious and costly duplications and unnecessary routines which are permitted to continue because no one has taken the trouble to analyze the office operations to eliminate such deadwood. What's the answer? A functional analysis of the paperwork in your office.

Every piece of paper being used in the company must be reviewed, as a first step. This means forms bought, the forms produced on office duplicating equipment, carbon-interleaved forms, flat forms, letterhead, envelopes, tags—everything. But you can't collect these forms merely by requesting them from your stationery stockroom. You'll miss as much as 50 per cent of the over-all total because there will be office reproduced forms, and others, not stored in the stockroom.

A forms collection letter to every department manager in the office and plant, in the home office and in every branch location, will bring in forms

you never dreamed existed. In the collection letter, you should explain what you mean by a form and the purpose of the collection. Explain that you want at least five copies of every form used in the department regardless of origin or disposition. Ask for an estimate of annual usage.

Chances are that in a manufacturing business with up to a few thousand employees you will have at least one form for every two employees. A firm employing 1,000 workers will have at least 500 forms. The ratio in service industries is much higher: about one form per employee.

When the forms are all collected, the first thing to do is build a numerical file. Assign every unnumbered or temporary form a number. These forms, together with the numbered forms, should be placed in indexed manila folders in straight numerical order. In each folder, show the department or departments using the form and the estimated annual usage.

Now comes the job of classifying the forms in a manner which will bring together all forms on a functional basis (a) to reveal: all duplications, regardless of form title, number or using department; all partially repetitive forms, regardless of title, number

or using department; all unnecessary forms; and (b) to establish a means of preventing the creation of unnecessary new forms from a procedural point of view.

Depending on the number of forms involved, select certain subjects, e.g., Costs, Credit, Customer, Drawing, Dues, Earnings, Employee, Employment, Entertainment, Estimate, Grievance, Injury-Illness, Inquiry, Insurance, etc., and proceed with your classification. To break down the volume, a further division is made under each subject. The subject is modified by an operation or condition. Thus, the subject "Employee" is modified by these operations or conditions: Absence, Examination of, Employment of, Identification of, Location of, and so on. With an appreciable volume of forms, further modification becomes necessary. The third modification that can be used is Function. Functions are these: to acknowledge, to agree, to apply, to authorize, to cancel, to certify, etc.

Now we have a classification of forms by subject, modified by operation or condition, modified by function.

Take a form titled "Requisition." First of all, the subject is not Requisition. The subject may be Material, Supplies, Employee, Cash, etc. If the requisition is for an employee, the form would be filed as follows: Subject, employee; Operation, employment of; Function, to request. The requisition requests the employment of an employee. Or if the requisition was for supplies, the form would be classified: Material—supplies, issue of, to request.

Experience proves the validity and effectiveness of this functional classification of forms.

To cut red tape takes a well-formulated plan and the courage and authority to carry it out. Red tape is very nearly synonymous with paperwork. Paperwork means forms. Control the forms in your office operation and you cut the red tape that means red ink.

—BURKE MULDOON. *NOMA Forum*, December, 1950, p. 29:2.

Prepare to Overcome Shortages of Office Help

REGARDLESS of the imminence of an all-out war, 1951 and the foreseeable future will find the office manager focusing his attention on two major problems both of which have been with him during the past decade. First and most important will be his struggle to maintain a staff of reasonably skilled workers—and in many industries, meet the requirement of expansion. Secondly, he will be called upon to keep office costs within reasonable bounds. What is the current situation?

1. Available statistics indicate that in an expanding economy, demand for

office workers increases more rapidly than for production workers.

2. There will be a continuing increase in the need for office workers in every phase of the defense effort and all government agencies, local, state and federal.

3. The low marriage and consequent birth rate during the early 'thirties has created a dearth of potential office workers today. This will continue for four or five years until the more normal baby crop of the late thirties come into the market as office workers.

4. When a growing demand confronts a limited or decreasing supply,

competition takes over. Unless the government steps in, wages will continue to mount and production per worker will probably decrease.

It is easier to envision problems ahead than to suggest solutions. Obviously, we must do everything within reason to retain our present staff. This means meeting the competitive wage scales, maintaining a congenial work environment, providing skilled supervision, etc.

Many companies will be forced to resort to two-shift operations and part-time help. It probably will be found that most applicants for part-time work have had previous office experience. The "night shift," usually from 6:00 to 11:30 p.m. with a half-hour for supper, requires skilled supervision. However,

it enables the company to utilize otherwise idle facilities, building, machinery, desks, etc.

Skilled professional training can help increase the production of clerical workers. Supervisory training can help us manage our manpower more effectively.

To an increasing degree, we should cement our contacts with high schools and other sources of recruitment. This implies selling yourself, your company and its job opportunities to the school faculties. We are definitely faced with a sellers' market in the foreseeable future, so it behooves the office manager to develop all the devices of salesmanship if he is to compete successfully for the limited supply of office manpower.

—FRANK L. ROWLAND. *The Office*, January, 1951, p. 53:2.

Personnel Management

How to Get Listeners

TODAY the future of our country depends on how well we can sell Americanism not only to the world but to the Americans themselves. Yet we find ourselves far better prepared to build a thousand super tanks than to build a dozen effective messages on the principles of Americanism. Why? Because we have spent millions of dollars on gadget research as contrasted with nickels on idea research, billions on atomic energy research as against dimes on research to direct human energies into the right channels. Thus we are as poorly prepared in the realm of communication as we are brilliantly prepared in the realm of destruction.

Years of study and research in the techniques of communicating ideas, conducted by The Psychological Cor-

poration, have served mainly to underline certain "musts" of effective communication, some of which will be considered here, primarily from the standpoint of their application to the employee publication.

Here's one: In promulgating your sociological or psychological cogitations and in elucidating your esoteric or exoteric ratiocinations, beware of platitudinous ponderosities, eschew philosophical profundities, and sedulously avoid all tautological and polysyllabical multiplicities.

In other words: *Speak simply, clearly and without double talk.* This is certainly an old and fundamental principle, yet what do we find? In a recent analysis of 69 articles selected at random from 13 representative employee papers, 37—or over half—

were on a readability level of difficult to very difficult, that is, above the educational level of 67 to 95 per cent of the adult population.

The second: *The impact of a message depends on the extent to which it identifies itself with the interests of its intended audience.* We studied the impact of a recent General Mills advertisement, "How Much Is a Vice President Worth?" The results on comprehension were good but in respect to beliefs and attitudes, mixed. Our study seemed to indicate that the ad was company centered instead of audience centered. Instead of "How Much Is a Vice President Worth?", a better title might have been, "Your Son Can Be a Vice President Too." And the ad might then have gone on to say:

Only one man can be President of the United States, but thousands can be presidents and vice presidents of companies. This is America and American opportunity. We, at General Mills alone, have 10 vice presidents [if that is the correct number] as compared with five a few years ago. Their average take-home pay after taxes is \$26,000 and they are worth every cent of it . . .

This would have made it an employee or public centered message with much greater impact.

Another principle: *It is impossible to know the impact of a message until it is tested on the intended audience. It is impossible to be sure a message*

is audience centered until that audience has been systematically consulted.

A final point: *The effectiveness of any communication depends on the sharpness with which its objectives have been defined.* When we come to building a communications machine or program, we too often build the machine without determining just what we want it to do. When we do state objectives, how do we state them? We may say: The objective is to give the facts. But why and how? Just what effect do we want the facts to have on beliefs and attitudes? Or we may say: The purpose is to improve employee morale. But at what points and how? And how can we know we have succeeded? This, our studies seem to indicate, is the greatest weakness in the entire field of communications today: the failure either to know or to state, in specific, "testable" terms, the object in view.

In our experiments, we arrived at a three-point definition of impact which management could profitably use to test its messages to employees: (1) *Readership and readability.* That is, to what extent will the message be read? (2) *Comprehension.* If read, to what extent will it be understood? (3) *Influence.* What effect will it have on people's attitudes or beliefs?

—From an address by HENRY C. LINK (Vice President, The Psychological Corporation) before the Association of National Advertisers, Drake Hotel, Chicago.

Today's Typical Working Woman

THE APPEARANCE of today's typical working woman doesn't give her occupation or interests away. Stop her at random anywhere—at a subway entrance in New York, or stepping off a bus in Los Angeles, Dallas, or Chicago. It's hard to tell by looking at

her what she does for a living, what she likes, what she reads, how much she makes. So, let's review some of her main characteristics as revealed in a comprehensive study:

How old is she? She's apt to be 35 years old and, as a typical working

woman, her average age is getting higher. Ten years from now her median age will probably be 37, and the whole population is getting older with her.

There are 107 of her in the population to every 100 males, and she has a life expectancy $5\frac{1}{2}$ years greater than that of a man, so that in addition to the economic and social pressures forcing her to work, there will be more and more women available to augment the labor force if our economy continues to expand.

Where does she live? The typical working woman in the categories described in this report is an urban resident. More likely than not she lives in a city of over 250,000 population. She is a part of the growing concentration of population in centers of industrial and commercial activity. She lives in a rented apartment or small house—with her family if single (only one out of five lives alone or with a roommate), with her husband if married (two out of five who have been married make homes of their own, with no husband present).

What does she do? The typical working woman probably works in an office as a typist and has been working for 10 years or more. If she is not a typist, she is probably a factory worker—most likely doing semiskilled manual work in an apparel factory or a textile mill. In a Southern city, the chances would be high that she would be a textile mill operator tending a battery of spinning machines. One out of 10 working women work in selling, usually in a retail shop but occasionally in a wholesale business. The typical woman worker is less likely to be a teacher, and still less a nurse, a telephone operator, or a waitress.

What are her earnings? She probably makes more than \$1,700 per year, which compares with over \$2,700 for working men. If she is one of the very few women at the top of one

of the professions, her earnings are far greater. At the present time she's working all year if she's in the regular labor force.

In addition to the women in the regular labor force, however, three and a half million women regularly work part time because they do not prefer or cannot accept full-time work. In fact, most part-time workers are women. Women working as salaried proprietors, managers and officials receive higher incomes than any other occupational group. By industry group, women employed in government receive highest incomes; next are women employed in transportation, communication, and other public utilities.

Earnings of the working woman have not quite kept pace with the cost of living, but because she is working steadily and because discriminations are being eliminated, she receives a bigger share than ever before of the national per-capita income.

Physical characteristics: You can take your choice in height, weight or looks, but the average woman's physical strength is 57 per cent that of a man's and her resistance is 70 per cent that of a man's. She can usually do any job a man can, if it is adapted to these limitations. She does *not* fatigue more rapidly than a man, and though she is absent because of illness more often, her total absence because of illness is usually *less* than the average man's.

Education: The working woman is well educated. If she's in any occupation other than factory or domestic service work, she will probably have finished high school. If she's a teacher or other professional worker, she will have graduated from college. In almost all her occupations except factory, domestic service, and selling, she will have had some vocational training, and she's anxious to get more—perhaps one-half of the working women in the 18 to 29 age group

would like to attend classes in their leisure time—and is interested in learning, among other things, interior decorating, photography, repairing household appliances, child care, industrial relations, public affairs.

Marriage: The chances are now better than one out of two that she's married, and that her husband is present. One out of six working women is divorced or widowed, and one out of 10 married working women is not living with her husband. About 400,000 working women marry every year. The average age at which the American woman makes up her mind about her husband is 20.5 years. Her prospective husband is 23.7 years old. When she gets married, incidentally, she and her husband will spend more than six times their ordinary expenditures for clothes, and 15 times the average established family's expendi-

tures for home furnishings and equipment.

The average woman is more likely to *stay* married today—the divorce rate has declined 37 per cent since 1946. If she becomes divorced, widowed, or separated from her husband, she will probably have to head her family and be its main source of support. If she's not working, she will probably enter or re-enter the labor force. There are over three million families currently headed by women and over 2,000,000 of these women work.

What are her expenses? Most of our typical woman worker's money goes for the upkeep of her home, for rent, and for food. Whether she is single, married, widowed, or divorced, she is apt to spend more than half her net income for these items. She will spend an additional one-fifth for clothes and personal care.

—From *The Working Woman of 1950*. Culpepper Hertz, Inc., 580 Fifth Avenue, New York, N. Y. Additional information concerning this report will be furnished on request to Culpepper Hertz, Inc.

Time-Tested Incentive Plan

RECENTLY \$3,994,463 was distributed to the 1,010 employees of the Lincoln Electric Company, Cleveland, in incentive payment checks and payments for the purchase of pension annuities. Checks distributed to all workers under the company's much-publicized incentive program ranged from \$32,000 for top executive and engineering talent to \$1 for workers employed less than a week. The checks brought the total yearly earnings of an average Lincoln worker to \$6,748—twice that of other employees in the Cleveland area doing similar work.

This is the 17th consecutive year in which this annual incentive payment has been made. In this period, Lincoln Electric has distributed to workers in incentive payments and pension annuity purchases a total of \$37,743,300, an amount several times as large as that paid to stockholders in dividends during the same period.

AMA MIDWINTER PERSONNEL CONFERENCE

The Midwinter Personnel Conference of the American Management Association will be held on Monday, Tuesday, and Wednesday, February 26-28, 1951, at The Palmer House, Chicago.

Recruitment and Selection In the Current Emergency

ERNEST DE LA OSSA

Director of Personnel

National Broadcasting Company

*The current need for manpower places a premium on speedy and effective methods of recruitment and selection—and puts a heavy burden on the executives responsible for setting these policies. To get answers to the questions management has been asking relative to this problem, EXECUTIVE'S LABOR LETTER editors recently interviewed Mr. Ernest de la Ossa, a recognized authority in the field. Presented below are some of the points covered in the interview.**

RECRUITMENT

Will industry have to lower its standards to get help now?

It will. Many employers have already lowered them.

Is there any new way of using old methods of recruiting—newspaper ads, for example?

Getting new workers is a sales job nowadays. Ads should have an honest sales slant. High pay rates aren't enough to get or keep workers; they're interested in all the "extras"—liberal vacations, bonuses, cafeterias that supply low-cost meals, and so forth. Lounge facilities and special services have an appeal for women workers. All the advantageous features of working for a particular company should be stressed. Moreover, ads might be placed on a space basis instead of in the regular classified columns. This gets more attention. And if an outfit is in an essential industry, it should make this clear in its ads.

How do you feel about "stunt" methods of recruiting, such as having a sound truck cruise the streets and broadcast that XYZ Co. needs workers?

When you're hitting the bottom of the barrel, any method that gets results

is a good method. I know of firms that have distributed leaflets from door to door, advertised in the local movie houses, even used skywriting.

Any other ideas for recruiting?

Employers can recruit through schools for students and teachers to work on a part-time or even full-time basis. And students will tell their families; some members of their families may be interested in what you offer. Churches or church organizations may be helpful; they often know of people to whom they're giving financial aid and who want jobs. Some more ways of getting new employees: Appeals to local relief or welfare organizations, women's and men's clubs, college alumni and fraternal organizations, spot announcements on the radio, help wanted ads on trucks and trolleys, help wanted requests enclosed with customer's bills and mailings, ads for help inserted in regular product advertising, unions, news releases on company expansion in which employment needs are indicated, outdoor display advertising.

SELECTION

Do you think application blanks need revision?

Not necessarily. A well-planned application blank is still effective. Of course, information about selective service and military draft status should be requested. Married women should be asked to give their husbands' occupations and draft status.

How might interviews be streamlined?

Preliminary interviews might be less selective. Let the applicant with minimum qualifications go through a full placement interview. And

* Several other points covered in the interview could not be included in this digest because of space limitations.—Ed.

because standards are necessarily relaxed, interviewers should omit the usual inquiries to determine the degree of acquired skill and proficiency. They should stress *potential skills and aptitudes* instead. And if the labor market gets so tight that a company is forced to take almost everyone who knocks at its gate, the preliminary interview can be omitted.

TESTING

What types of tests should be shelved for the present?

When you have a tight labor market and rising employment, you must sidetrack a test that isn't completely validated and that *may* contribute to effective *selection* but that also may *exclude* some good applicants. If an employer knows that a test is thoroughly accurate for his own work situation, or for conditions known to be similar, he may continue to use it—but it may be necessary to lower the passing score.

—*The Labor Trend* (Supplement to the *Executive's Labor Letter*, National Foremen's Institute, Inc., New London, Conn.), December 7, 1950, p. 1:2.

Are any tests absolutely essential?

No. Many firms do a successful job of hiring and placement simply on the basis of skilled interviewing and checking of references. But tests can be valuable aids to selection. Thus, aptitude tests may be useful when a firm is hiring candidates for work in which a long training period is involved, such as selecting apprentices for skilled trades. These tests are designed to *predict* an individual's *ability to learn* a new task and show whether it's worth while to train him. Standardized tests have been developed, and probably will be the ones most used now.

An intelligence or general information test is still helpful. Two scores are important: A lower-limit score to eliminate applicants whose ability level would be too low, and a maximum score to eliminate candidates who would be too intelligent for the job at hand.

Military Leave and the Bonus Question: A Survey

MILITARY LEAVE policies have been revised since June, 1950, in 80 per cent of 150 companies recently surveyed by the Conference Board. Problems of bonus payment, pensions, group insurance, and hospitalization are now being examined in relation to over-all military leave policies. Here are some highlights of the survey findings:

Current military-leave policies are "about as liberal" as those followed in World War II, say three out of four survey cooperators. Greater liberality is reported by 15 per cent. Most of this, the Board notes, is accounted for

by new postwar benefit plans which are being supported in whole or in part during the military leave. The 10 per cent of cooperators who are less liberal feel conditions do not yet dictate going "all out" for the veteran.

About 98 per cent of respondents have policies applicable to salaried and hourly non-probationary employees alike. Only a few companies are less liberal for the hourly-paid people, and this distinction is made exclusively in the area of induction bonus payments.

Only about 5 per cent of cooperators distinguish between volunteers and those drafted or recalled when it

comes to granting benefits beyond those required by the law.

Approximately two out of three respondents are paying some type of separation bonus to the departing employee, over and above any accrued vacation pay. The remaining 35 per cent are making no payments other than earned vacation pay.

On the question of induction bonuses, about 90 per cent of co-operators say that regular salaried em-

ployees and executives are treated similarly. The remaining 10 per cent report that bonus payments to executives will be handled on an individual basis.

Where the bonus for hourly-paid people is defined in terms of a "week's pay," about 85 per cent of co-operators are basing this pay on a 40-hour week. The remainder are basing it on the average weekly hours worked at the time of the employee's departure.

Auditing Industry's Medical Facilities

THE AUDIT of industry's medical administration may be undertaken by a doctor just as he undertakes to diagnose a patient. He wants a complete diagnosis through a complete examination. He must have this before he can prescribe intelligently. His chief tool is the question, countless numbers of them through which he will attempt to extract the following information:

1. Data on professional personnel including physicians, local medical specialists, nurses.
2. Description of available medical facilities in a plant.
3. Number of cases treated by the facilities in a normal period.
4. Details on procedures used in physical examinations and dispensaries.
5. Laboratory facilities.
6. The manner in which records are kept.

An entire industrial health program can stand or fall on the type of professionals charged with its administration; thus the examiner must know a great deal more about a plant physician than the college from which he was graduated or how long he has been practicing. The physician's skill should be considered. It is important to know whether he does minor surgery, and also whether he is competent to perform major surgeries, or whether these cases are placed un-

der the care of specialist consultants.

Without prying too closely into his personal affairs, a wise management should determine whether he be placed on a salary, retainer, a fee-for-case basis, or any combination of these three, how his remuneration is affected by state industrial commission fee schedules, and whether package plan insurance programs supplement his income.

A nursing personnel survey can be made similar to that of physicians, allowing for changes peculiar to professional and employment status. The medical department should be located nearest the spot in the plant where the case load is greatest, so that injuries may be treated quickly and effectively. A simple check on calls can be made by listing the 10 most frequent occupational calls and the 10 most frequent non-occupational calls. If their significance is analyzed, and if the work areas from which they come are plotted, much valuable information for the correction of dangerous conditions can be obtained.

Record analysis should be periodic. For the sake of brevity and efficiency the examiner should check whether all forms are useful. It is also wise to find out if monthly, quarterly, or

yearly tabulations are made, and whether these tabulations reveal unusual or significant circumstances pointing to disease or injury incidence. For a complete check, direct and indirect medical service should be compared, and the percentage of each

noted. Before the examiner can say his audit is completed, he should visit each department in the plant to note each operation and to determine how these operations might create hazards.

—From an address by C. RICHARD WALMER, M.D., Medical Director, Industrial Hygiene Foundation, at the Foundation's 15th Annual Meeting, Mellon Institute, Pittsburgh.

Some Collective Bargaining Problems in Expanding for Defense

IS YOUR COMPANY going into a new field to fill a defense contract?

If so, and if it means opening another plant or setting up new departments to handle different work than usual, there will be strong pressure from the unions representing your present production team to "cover-in" the new setup under the current contract. Offhand, you may be inclined to yield; where union management relations have been running smooth, it seems pointless to raise legalistic flyspecks to block an already settled issue. But if there is the slightest hint of rival unionism in the air, it will pay you and the incumbent union to observe NLRB rules closely. Here are some points to check while you're still in the planning stage:

Any substantial addition that's more than mere expansion of your present setup is a new separate bargaining unit.

A union that hasn't offered reasonable proof of its majority isn't entitled to represent the unit involved.

Don't rely on any clauses in your present contract that provide for automatic extension to new departments or new plants. Rights of a new group to pick their own bargaining representatives can't be foreclosed ahead of time.

If you have a definite hiring schedule, no majority representation claim is valid until the bulk of the new employees are taken on.

Premature recognition of the present union as bargaining agent for the new group won't take away any rival union's right to an election.

Premature recognition greases the track for a charge of illegal assistance to the established union—doubly so if any union security arrangement is involved.

If the incumbent union continues to demand immediate bargaining rights on the ground that the situation represents mere expansion, don't just stand pat on your refusal during the build-up period. File a prompt petition to clarify the certification covering your present bargaining unit. That protects two ways—besides settling the unit issue without designating any representative for a new bargaining unit, it's a sign of good faith. That will make it hard to pin refusal-to-bargain charges on you in the event your unit position proves wrong.

—*Labor Checklist* (Research Institute of America, Inc., 292 Madison Ave., New York 17, N. Y.) 12/20/50

Building Sound Policies on Reference Inquiries

MANY FIRMS TODAY are checking more carefully on the references of job applicants to avoid being stuck with some of the dregs that always float to the top of the manpower barrel in times like the present. Yet frequently the information given out by former employers is so vague that the company interested in hiring the individual is unable to base judgment on it.

A recent ERB check on practices dealing with supplying information to outsiders about persons still employed showed that comparatively few firms had

established policies on giving out such information. Frequently, it was left to the discretion of the individual answering the inquiry. References often were based on memory instead of records. Some companies even give stock answers which shed little light on the individual's character or ability.

Not all the results of the survey were negative, however. The following, on the constructive side, were gleaned from the potpourri of policies:

Definite rules for answering telephone inquiries should be formulated, primarily to avoid the indiscriminate dissemination of confidential information. Here are some ideas:

On reference check-ups, some companies confine themselves to verifying factual data only—duration of employment, and the like—and do not express opinions about character or ability of individual. However, telephone checkups are becoming increasingly popular as time-savers. Many personnel men are finding it good policy to cooperate fully, except where they feel a particular item of information is confidential or not necessary for reference purposes.

Inquiries about salaries generally are not answered over the telephone.

On inquiries to determine the credit standing of employees, most firms take pains to verify the identity of the caller. One way to do it is to tell him it will be necessary to check the employee's record and that you will call him back. Then you can check the telephone number to see if it is as represented.

In answering reference inquiries, try to be as helpful as possible. Remember, you want accurate, detailed facts when you're checking on an applicant. Turn about is fair play.

American Hard Rubber finds out as much as possible about the job its former employee is applying for. Then it gears the data it supplies to the duties of the job the individual will have to perform. If it knows something unfavorable about the employee that is not relevant to the new job, that item will not be disclosed unless specific inquiry is made.

Westinghouse has an interesting technique when handling reference requests for top-flight technical people. These requests go directly to the head of the department in which the individual formerly worked. The company feels that the supervisor is the one best suited to form judgments about persons with unusual skills or talents.

—*Employee Relations Bulletin* (National Foremen's Institute, Inc.) 12/27/50.

Employment Office on Wheels

A 26-foot, silver-and-red aluminum trailer helps track down skilled labor for Pesco Products Division of Borg-Warner Corporation. The unit has been operating in the Cleveland area since mid-September.

"We need more men to help fill our defense orders," said R. J. Minshall, Pesco president, "so we're going out to find them."

The trailer is staffed by a secretary, who interviews and screens prospective applicants, and another company official who does the actual hiring. Inside the mobile employment unit are two compartments. Prospective employees enter through the reception portion and go out through the second interviewing section. The company stations its employment trailer in strategic locations for about a week at a time. Hours of interview run from 2 to 6 p.m. five days a week, and 12 to 2 p.m. Saturdays.

—*Factory Management and Maintenance* 12/50

A STUDY of 10 large industrial firms revealed that approximately 8 per cent of the skilled and experienced workers between the ages of 35 and 45 years showed outward signs of alcoholism. Employee alcoholism is estimated to reduce over-all national productivity at least 2½ per cent.

—*Management Information* (Elliott Service Company)

Union Wage Decisions and Employment

THE STRATEGIC IMPORTANCE of union wage decisions in the economy underline the significance of a question which has increasingly concerned economists: Are a union's wage decisions influenced by the possible effects of those decisions on the employment opportunities of its members?

Two recent field-research projects indicate that some unions, faced with a particular set of labor market and product market conditions, do take into account the probable effect of wage demands on the level of employment for their membership. These situations are not exceptional cases, save in periods of full employment and rising prices. On the contrary, the conditions which make it necessary for unions to consider the employment effect are found in a number of industries, particularly those in which: (a) there is strong competition in the product market, and (b) the industry is not completely organized.

Examples from one study follow:

One company operating in a competitive industry settled for no wage change, despite large company profits for the preceding year. Union officials were apparently concerned about the impact of a wage change on job opportunities within the company, for they pointed out to the membership in a mimeographed statement that

in our own area and in other areas . . . factories are being permanently closed . . . the important thing for the employees and the company is to keep

production at a good level and to keep the factories going at the maximum number of full weeks of work.

The membership agreed; the rank-and-file vote in favor of this settlement registered a 4-to-1 majority.

In two other cases, not in the same industry, the AFL and CIO unions involved had usually made large wage demands and had obtained several sizable increases during preceding years. At this time, however, the unions asked for two additional paid holidays. But after one bargaining session, this demand was dropped and the contract settled with no change. Employee representatives on the negotiating committees had been on "short time" for several weeks and were impressed with employer arguments that increased costs at this time threatened his ability to attract orders. In still another company, a union leader explained his failure to press for wage demands with this statement: "You can't push that guy anywhere except out of business."

In another case, a six-cent general increase was given by the company in exchange for acceptance of a job evaluation and time study plan which, by raising work standards without major changes in plant layout, brought labor costs to their original level. Why didn't the union insist on more pay for more work? The CIO International officer stated that he could not work up any "steam" in the local people, who were "scared for their jobs and wanted their weekly income."

—G. P. SCHULTZ AND C. A. MYERS. *American Economic Review*, Vol. XL, No. 3.

Mobilization and the Labor Market

TODAY'S PROGRAM of partial mobilization, coupled with continued high demand for civilian goods, is expected to create a very tight labor-market situation by mid-1951.

In some fields, the shortage of workers which existed in early 1950 will be

intensified. In others, the surplus of workers will be eliminated or much reduced. However, there are some fields in which the mobilization program is not greatly affecting employment. The varying effect of the program is illustrated by the following brief summaries of the situation in a number of different occupations.

The impact of the rearmament program on the demand for electronic technicians has been especially sharp, because the great need for electronic technicians in defense work is coming at a time when the television industry also requires more skilled men.

Hiring has greatly increased since June, 1950, in the scientific and technical professions also, particularly in engineering, chemistry, and other specialties directly involved in defense production. And will no doubt rise still further in the future, though probably not as fast as during the past few months.

Another group of occupations in which the mobilization program will create a sizeable increase in demand for workers is the skilled metal-working occupations. Skilled workers such as tool and die makers, machinists, and molders will be in great demand in the next two years.

Clerical occupations will be relatively short of workers in the near future, and also such jobs as service station attendant, hotel bellman, and waiter.

Employers are again faced with the problem of high turnover rates, as relatively low-paid office workers move into better-paying war production and government jobs. Since the defense program is still in its initial stages, further increases in the numbers of withdrawals from clerical jobs and in the demand for new workers are to be expected.

—HELEN WOOD in *Monthly Labor Review* 12/50

NLRB Policy on Jurisdiction

THE NATIONAL LABOR RELATIONS BOARD recently announced establishment of standards which will govern its exercise of jurisdiction under the Taft-Hartley Act. This long-needed statement of policy gives employers a dollars-and-cents test by which it may be determined whether or not the Board will assume jurisdiction over a particular business. The plan, which emerges from eight decisions, contemplates exercise of jurisdiction, when the statute applies, over:

- (1) Instrumentalities and channels of interstate and foreign commerce, e.g., radio systems.
- (2) Public utility and transit systems.
- (3) Establishments which operate as integral parts of a multi-state enterprise, e.g., chain stores, and branch divisions of national or interstate organizations.
- (4) Enterprises which produce or handle goods destined for out-of-state shipment, or performing services outside a state, if the goods or services are valued at \$25,000 a year.
- (5) Enterprises which furnish services or materials necessary to the operation of enterprises falling into categories 1, 2, and 4 above, provided such goods or services are valued at \$50,000 a year.
- (6) Any other enterprise which has: (a) a direct inflow of material valued at \$500,000 a year; or (b) an indirect inflow of material valued at \$1,000,000 a year; or (c) a combination inflow or outflow of goods which add up to at least a total of "100 per cent" of the amounts required in items 4, 5, 6 (a) and (b) above.
- (7) Establishments substantially affecting national defense.

These standards should eliminate much of the confusion which has existed in the past over the jurisdiction question.

—*Merchants and Manufacturers Association (Los Angeles, Calif.) Information Bulletin*

What Mobilization Means to the Company Personnel Program

TODAY the United States is not in any temporary emergency. It is entering upon a complete new economy. We are now in the position of being the father of two world families—with the job of supporting and policing our own family, which includes approximately half the world.

We are going to be faced with price and wage controls; high personal income taxes; the freezing of critical skilled labor; universal military training; loss of large numbers of employees who will be drafted under Selective Service. There will be limitations on the placement of professional and scientific personnel. There will be a further limitation on free collective bargaining.

What can management expect from these trends? Not temporary changes but a new type of economy. Taxes are not coming down again. The army will not be reduced. Controls will not be lifted at the end of X number of years. Don't be fooled.

We will have increased executive and labor turnover in industry—and a reduction in quality of work. Along with quality, we are going to lose the desire on the part of employees to give service to customers. We are going to have a lowering of productivity per man-hour; higher absenteeism; a decrease in employee morale; an increase in the severity and frequency of accidents; and a much greater waste of supplies, materials, and utilities. To sum the whole thing up, we are going to have increased costs. Those are some things management can expect from the changes that will take place as a result of mobilization. What can the personnel department do to help management cope with this situation? Here are a few suggestions:

Let's start at the top—with a management audit. Let's get a top team that can really produce. Let's find out whom

we may lose out of that top management team during the next 10 years, and make some preparation for replacements. Not a few companies have found that the replacing of one executive improved the whole organization. The resulting teamwork brought about production and profits unheard of in the past. So, a vital step in the management audit is an analysis of the teamwork aspects of the management force.

The second step in preparing for this new economy is to start a program of understanding—understanding of your own business. Start by determining your employees' present level of understanding—the level at which you will have to start talking. You also have to know what the needs are in your own organization. What is it employees want to know and what should they know? On the basis of those needs, set up a program to fit your own situation and your own people. Then, having set it up, don't just relax. Periodically you have to determine whether or not you are doing the job you set out to do.

The third course of action is to review, or establish, a salary and wage administration plan. Any and all wage and salary inequities should be eliminated now. A review of any and all incentive plans that you have is in order now, also. It might be well to lay out a program for making periodic wage and salary surveys in your industry and area; study various cost-of-living bonus plans to determine if there is a place in our organization for one. If not, at least you should know the arguments for and against them in your company. You should analyze your benefit plans and make comparisons of these with all others in your industry and area.

It would be advisable to review and modernize all selection procedures, so

that you can do a better slotting job than has been done in the past—not only for the purpose of getting out more production, but also for the purpose of making people happier in their work; not only for the purpose of getting a person with the right amount of hand-eye coordination on a given occupation, but also to get an individual working with a group that he or she likes to work with.

Finally, here are a number of areas

that should be considered now to avoid unanticipated problems later on: overtime schedules, induction procedures, housing of employees, transportation of employees, government bond drives, production drives. And these are only a few. There are many others, and now is the time to take stock of these aspects of the personnel function, and try to foresee the problems that may arise and how they should be met.

—From an address by GUY B. ARTHUR, JR., before the California Personnel Management Association, Berkeley, California.

Supervisory Training in Europe: The Swiss Method

IN many European countries in recent years, the training of supervisors has been assuming increasing importance. World War II gave new impetus to the development of such training, because of the need for maximum productivity on the part of both workers and supervisors.

Some training methods are in use in more than one country, for example, the Training Within Industry system (TWI), which was developed in the United States during the war, and which has since been adopted in many nations of Europe, e.g., Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. Similarly, the courses organized by the Swiss institutes of applied psychology have been attended by foreigners who wish to use the Swiss methods in their own countries.*

The Swiss system of supervisory training differs considerably from the

TWI method. The purpose of the latter is to give the persons concerned certain habits of rationalizing work, whereas the Swiss institutes of applied psychology aim at influencing personality. The Swiss system has three main purposes: (1) the supervisor must understand his subordinates and foresee their reactions, and to that end must have knowledge of psychology; (2) he must create a good working atmosphere and not be concerned exclusively with increasing productivity; (3) he must know himself and learn to use his authority, not in his own interest, but in that of his subordinates. Thus the supervisor's character must be developed so that his attitude toward his fellow-workers and his work may be improved.

The Swiss psychologists give trainees time for thought by removing them from their daily concerns. Courses are organized in pleasant locations away from the trainees' job surroundings, and are generally short—sometimes lasting only a week.

The program itself is developed in discussion groups consisting of 12 to 25 trainees. Discussion is led by an

* Because of space limitations, only the Swiss method will be considered here. This article deals, however, with several other aspects of supervisory training in Europe, notably, the C.E.G.O.S. System in France and the C.O.F.C.E. System in Belgium.—Ed.

expert in the questions under consideration. Each set of discussions begins with a brief outline of the question to be studied and of the Swiss methods, so that trainees may be aware of the essential points. Subsequently, every morning's discussion is preceded by 15 minutes' silence for thinking over the questions discussed the day before. One feature of the Swiss method is the organization of teamwork. Thus groups of three or four persons are asked to study the

subject which will be taught on the following day and to exchange views on the matter. At the end of the meeting, these persons prepare the discussion, with concrete illustrations, for the following day.

There is no organized system of following up trainees after the training courses have ended. Psychologists urge, however, that the training of supervisors should be completed on the job through the guidance and example of the heads of departments.

—*International Labour Review*, Vol. LXII, No. 1, p. 1:18.

Employee Participation Programs in Federal Agencies

AN EFFECTIVE METHOD of bringing together employee and management views on policies and conditions of employment is in use at the Library of Congress, Washington, D. C. The system has paid off in improved employee-supervisor relations, greater understanding between employees and management, better acceptance of policies and procedures. Known as the Direct Participation Plan, this program provides for automatic employee membership in discussion groups, limited to 25 members, which meet regularly. Two-way communication between employees and management is facilitated—with management referring problems and policies on which it desires employee reaction to the employees or their representatives; and employees submitting their recommendations to management.

During the first three years of the plan's operation, approximately 2,000 group recommendations were submitted, of which more than 75 per cent were approved. The 2,000 Library employees are divided into 96 staff discussion groups which meet once every other month. Length of meetings is not regulated but ordinarily a group remains in session for about two hours. The first half of each session is devoted to discussion of topics which were previously presented to the group leaders by the Librarian. The latter half is used for discussion of any matters the employees wish to discuss which are not individual in nature. Group recommendations evolved are referred to the Librarian of Congress for decision, and prior to the next regular meeting, a complete report of his decisions (and the reasons therefor) is published and circulated to all employees.

—R. G. BEERS and D. LOCKE BELL in *Personnel Information Bulletin* (Veterans' Administration, Washington, D. C.) 10/50

The Teamwork Approach

PRACTICALLY ALL manual workers (19 out of 20) consider themselves part of a definite group or team, according to a recent survey by Opinion Research Corporation. Only 4 per cent say they work alone. For the most part workers are proud of the ability of their teams to produce. When asked to rate their own production group on "their desire to get out the work," 44 per cent termed their group "the best" or "one of the best" in their company; 49 per cent said "average"; only 2 per cent said "below average."

Protecting Executive Health

IN THIS ERA of atomic tensions, no one suffers more than the industrial executive. A recent Conference Board report says that of 500 industry officers examined by the Life Extension Examiners of New York, 62 per cent were found to have conditions requiring a doctor's attention.

Associated Industries recently surveyed twenty-five typical employers to find out what they are doing to check on executive health. Here are some of the findings:

Company A: Annual physical examination for executives, who may go to their own or the company doctor. The bill is submitted to the company. There is a maximum of \$50, but if over, the company may pay. The executive does not have to submit the doctor's report. The company goes on the theory that the individual will voluntarily tell if anything is radically wrong with him. The policy was initiated in 1947.

Company B: Physical examination is annual. The executive goes to his own or the company doctor. The bill is paid by the employer. The doctor fills out a form supplied by the company and mails it to the president, who regards it as confidential. If anything is radically wrong with the individual, the company decides what to do.

Company C: Annual physical examination for all employees. The company doctor makes examinations by appointment at the plant, which has X-Ray and all other necessary equipment. The report is confidential between the doctor and the employee unless something is radically wrong, in which case the doctor informs management. The company assumes all costs.

—Associated Industries of Cleveland Newsletter

Who's a Labor Relations Man?

THE QUESTION of what makes an industrial relations executive was recently probed by *Business Week* in a survey of 38 business executives whose primary responsibility is labor relations and who rate among the top men in their field in America.

The survey showed that the respondents ranged in age from 27 to 50 when they took their present jobs; most were in their middle 40's.

Their education ranged from an interrupted schooling in the primary grades to Ph.D.—five have law degrees, most have B.A.'s, 17 have done graduate work, one to earn an M.D. Their most common field of academic study was economics. Psychology was second, business administration third, science and engineering fourth.

The major field of business experience for most of these men has been in employee relations.

To the question, "What are the most useful sources of information which you find important in doing your job?", the most common answer was personal contacts—with other business executives, with professionals in the labor relations field, with employees and supervisors in their own company, and with union officials. Although many of them indicated that conference groups were useful, they stressed that off-the-record and informal meetings were especially valuable.

—*Business Week* 8/12/50

FIGURES RECENTLY ISSUED by the Bureau of Labor Statistics show a trend toward adoption of cost-of-living clauses in collective bargaining agreements. Seventy-nine, of almost one thousand settlements made in September, covering 205,000 workers, included a provision for periodic cost-of-living adjustments. In 45 of these, the contract also included promise of a separate wage increase at a later time. In the first nine months of the year, the combination of a future wage increase and a cost-of-living adjustment was adopted in 85 settlements.

—*Labor Relations Letter* (U. S. Chamber of Commerce) 11/30

Production Management

Gearing Production to the Demands Ahead

RICHARD S. REYNOLDS, JR., President
Reynolds Metals Company, Richmond, Va.

"THE GREATEST of all weapons in the arsenal of American Democracy is the least secret. It's production. Production and still more production—that's really our one fundamental hope for meeting the challenge of defense and preserving peace." Thus, succinctly, did Leon Keyserling, the President's chief economic advisor, recently express the challenge that confronts American industry today.

Since World War II, the productive capacity of our plants has been maintained at such a high level that the rate of production at midyear, 1950, according to the Federal Reserve Board's index, was at a peacetime altitude of 197. That is virtually double the factory output in the comparative period 1935-39.

As we mobilize for defense today, we face a markedly different situation than that of 1942. Industry had large reserves of idle capacity then. Moreover, there was an enormous reserve of manpower; 8,000,000 people were unemployed. Today we have virtually no idle plant capacity. Employment is again nearing its peak level.

There is every indication that approximately one-sixth of our production today will be required for national defense. There is to be expended on this program including foreign military aid perhaps as much as 40 to 50 billion dollars a year. To reach such a high level of military production within the next year will be a considerable strain on our general economy.

Let's consider the demand ahead in

just one industry by way of illustration—the aluminum industry. The government has found many new phases of military armament in which aluminum is regarded as the superior material for specific needs. Just as many new uses for aluminum have been recognized by the civilian economy. Thus aluminum will be in great demand in the preparedness program. In the past year, the required expansion of production of virgin aluminum resulted in an 18 per cent increase in output—i.e., a rise from 315,000,000 pounds in the third quarter of 1949 to 372,000,000 pounds in the third quarter of 1950.

Aluminum facilities of the nation are producing over 1,400,000,000 pounds annually, more than four times as much as at the beginning of 1940. The aim is to increase production of primary aluminum by 258,000,000 pounds in 1951. This is an additional increase of 17 per cent.

Producers of primary aluminum are negotiating for facilities which provide for a total expansion of perhaps a billion pounds. If this expansion is effectuated, the United States will be making seven times as much aluminum in 1953 as it was at the beginning of 1940. Reynolds Metals Company has reached an agreement with the government to raise its production in 1952 to 71 per cent above January, 1950. The steel industry plans indicate an expansion to 110 million-ton capacity, which represents a 9 per cent increase over mid-1950. The government is setting

From an address before the Fall Production Conference of the American Management Association, December 11-12, 1950, at The Drake Hotel, Chicago.

as its objective a 20 per cent increase in aviation gas production.

Military demands are constantly being revised upward. As of the present, the immediate minimum demands require \$8,000,000,000 of aircraft production; \$2,500,000,000, ordnance; \$1,600,000,000, tanks, trucks and cars; \$3,500,000,000, electronics. The classification of electronics includes radar, aiming devices, and proximity fuses.

On the home front inflation is one of the most powerful weapons on the side of the Communists. The only real antidote to inflation is production—production to provide enough for both guns and butter. Industry thus must meet civilian requirements in a way that will maintain the domestic economy at the highest possible level, curtailed though it may be. And it must be recognized that in our struggle against the Russian ideology, cutting civilian consumption in order to provide essential materials for military needs must be regarded as a temporary expedient. So it is obvious that the demand ahead is tremendous.

Maximum production is certain to be required for some time. There is no magic formula by which we can instantly boost production. We must do as much as we can with what we have. There are numerous little things that can be done in most plants by which output can be increased. Few plants are so highly efficient that their efficiency cannot be improved. Plant managers, for example, will need to concentrate on how to reduce waste in the plant, on how to reduce the productive time lost as a result of machines being down, on how to keep operations simple—avoid complications.

The key to increased production is

people. As we gird ourselves to meet the demands ahead, it might be well to re-examine our entire staff. After a considered, objective survey of our situation, it would be well to be certain that we have the right executives in the right spot, equipped with ample responsibility and authority. It is more important than ever that we train and develop our department heads and junior executives.

The most important single individual in this striving for enlarged production is the foreman. There should be increased communication between the foreman and his boss. He should be consulted frequently and stimulated to seek improved production methods. A sustained training school for foremen in which they are more actively identified with management, in which they are made to feel that they are a part of the team, can be made a factor in better employee relations as well as more efficient plant operation.

Plant man-hour production will be what workers individually and as a group want it to be. The workers themselves must want to see increased production before it can be realized. This attitude seldom develops unless the worker feels that greater production is worth while to him. If he feels that greater production means increased security and advancement for him, he will produce. It is through the leadership of the supervisors that this idea can best be transmitted.

The supervisor can do more than anyone else to instill in the worker the desire to do a fair day's work, and to foster employee loyalty to the company. But he needs the help and guidance of management in translating these intangibles into reality.

AMA SPRING PRODUCTION CONFERENCE

The Spring Production Conference of the American Management Association will be held on Monday and Tuesday, March 26-27, 1951, at The Waldorf-Astoria, New York.

Inventory Is an Investment

IT is almost impossible today to find a business or trade publication that has not thrust upon the business world an "authoritative" article stressing the absolute necessity of keeping inventories down to some arbitrary number of weeks' or months' supply. This oversimplification of a complex problem has cost business untold sums.

The practices advocated by this article are predicated on an elementary principle which many managements have apparently lost sight of: *The one and only quantity to manufacture or buy is that quantity where the sum of the cost of possession and the cost of acquisition is the lowest. Complex? No!* The following simple sixth-grade arithmetic should make it readily understandable:

Item: Special Sleeve
 Yearly usage: 1,200 pieces
 Setup cost per lot: \$8.25
 Unit cost (less setup): \$.10 each
 Management's inventory policy: 1½ months' supply
 Inventory carrying cost—20 per cent (includes taxes, interest, obsolescence, storage, etc.)

ANALYSIS

	1½ Months' Supply Method	Most Profitable Method
Quantity	150 pcs.	1,000 pcs.
Setup cost per year	\$ 68.00	\$10.00
Inventory carrying cost per yr.	1.50	\$10.00
Yearly variable cost	\$ 69.50	\$20.00
Additional profit per year...	—	\$49.50
Additional average inventory	—	\$42.50
Return on extra investment 116 per cent per annum		

Remarks:

Low inventory? Yes. But examine the premium being paid for excessive setups! What business man would knowingly turn down a \$49.50 profit on an investment of \$42.50? Yet that is exactly what is happening in hundreds of plants every day.

Another favorite current subject for "authoritative" articles is the constant specter of steadily climbing office and indirect expense. Management again

is at fault in promulgating arbitrary and inflexible inventory rules which cannot help but contribute to materially high indirect expense in the repetitious processing of transactions representing small sums. Only recently the Hoover Commission criticized the Federal Government for exactly this, yet many business concerns are guilty of the same inefficiency but apparently are unaware of it.

Management should re-examine its dictates and adopt realistic policies whereby quantities are determined in the light of *their earning power*.

Peculiarly, most concerns have devised practical, "hard headed" procedures for evaluating the desirability of proposed capital expenditures. Decision is strictly contingent upon "yield on investment." But it's the same 59-cent dollar when invested in and earned by inventory. Why have a different policy or, as in most concerns, no realistic policy at all?

Management would also be well advised to consider vigorous campaigns to cause their sales departments to discourage the processing of uneconomical picayune sales. Many concerns would do well to review their quantity discount schedules for revision aimed at encouraging sales in larger multiples.

American industry has done a terrific cost reduction job in manufacturing methods. Solving of problems outlined should be simple by comparison and extremely profitable, but will be achieved only when management analyzes its faults, recognizes the shortcomings, and takes vigorous measures to correct them. The means to accomplish these ends are available. Simple quantity analysis forms, nomograph charts, etc., have been devised to reduce complex formulae to fool-proof clerical operations. Yield on

investment can be easily determined.

How much return do you want on your money? Free your purchasing agent from the straitjacket of an arbitrary inventory policy, and let him

think in terms of dollars as well as of coverage; discard the expensive fetish of stock turnover as the only measure, and he can show you profits you never dreamed existed.

—J. H. O'CONNOR. *Purchasing*, Volume XXIX, No. 3, p. 73:2.

Cooperative Waste-Reduction Program Pays Off

A UNIQUE PROGRAM whereby factory employees can increase their earnings through the reduction of certain expense items is being conducted by the Nineteen Hundred Corporation, St. Joseph, Mich., manufacturer of Whirlpool home laundry equipment.

The waste elimination program centers around five major expense items: idle time, perishable tools, rework, scrap, and supplies.

The program is based on the ratio of the cost of these five items to the cost of direct labor. The standard is their average cost during the past three years. In other words, if these five items averaged 35 per cent of the cost of direct labor during the past three years, employees would have to bring the figure down below 35 per cent in order to profit. Any savings made through cooperative efforts of the employees and the company are shared with employees on a 50-50 basis.

The actual percentage of reduction is determined each month, posted on special bulletin boards mounted in all company buildings. Payment is made quarterly based on the previous three months' results and is on the basis of hours worked. Employees will receive a separate check for this so they can see how much the program has benefited them. All hourly plant workers except plant guards are included.

The figures released for one month in which the plan was in operation showed a credit to the employees of \$8,841.38, or 2.12 cents per hour for each of the 2,600 eligible employees.

To help promote the program Nineteen Hundred has regular meetings with representative groups from the different departments. In the meetings, progress is discussed and suggestions are made on how additional reductions can be accomplished. To date a substantial gain has been made, and it is expected that further reductions will be achieved as the program gains momentum.

Worker Attitudes Toward Increasing Productivity

A LARGE PERCENTAGE of workers in industry today feel that productivity is management's responsibility—not theirs, a recent survey by Opinion Research Corporation shows.

Approximately half the workers (49 per cent) surveyed acknowledged some responsibility to help raise production, but almost as many (45 per cent) say, "There's nothing we can do. Productivity is the boss's worry, not mine."

When workers are asked what can be done to raise production per worker and lower cost they come up most frequently with such ideas as: provide more and better machinery, 14 per cent; raise wages, provide incentives, 7 per cent; devise better methods, cut bottlenecks, 6 per cent; provide better working conditions, 5 per cent; raise production schedules, 5 per cent; use better materials, 3 per cent; get better qualified supervision, 2 per cent. In other words, workers threw the productivity ball right back to management.

Only 10 per cent suggest steps by workers themselves, e.g., doing a better job, avoiding waste, being more careful.

—*Guides for Management from Current Opinion Trends* (Opinion Research Corporation).

Speeding Production Through Modern Materials Handling

TODAY industry is confronted, for the second time in a decade, with the dual problem of equipping the nation for possible total war and, at the same time, meeting a seemingly insatiable demand for consumer goods. That the solution must lie in increased productivity is becoming daily more apparent. To achieve greater productivity, industry now has a prime tool with which to harvest the fullest capacities of existing plants, old or new—modern materials handling.

Most old-plant problems include shortcomings in physical structure and production layout. Thus it is not the chronological age of a plant which truly signifies its age, but rather the extent to which such shortcomings exist. From a materials handling viewpoint and thus from a production viewpoint, even a newly-built plant is "old" if it has these characteristic disadvantages.

Let's see how a few of the shortcomings of many firms' existing plants are being overcome by use of engineering ingenuity.

Some old plants are faced with the problem of loading facilities designed for trucks formerly equipped with side doors. This problem is further complicated because there is often no room for the truck to back up to the loading platform in the usual manner. This has been solved by one company by installing a hydraulic bridge piece that scoots out from under the door of the building at right angles to the tailgate of the truck to make a very satisfactory platform. In addition, when there is no such vehicle to be loaded, the bridge piece is retracted so that the alleyway is clear for vehicles. Another common problem in old plants is the lack of headroom and clearance for today's enlarged highway trucks and railroad cars. One firm solved both problems by breaking an opening through the outer wall of the building,

about ten feet above ground level, to accommodate a gravity wheel conveyor. Now, incoming shipments are taken from the truck or freight car, placed on the conveyor, and shipped to storage or process areas throughout the plant without any additional loading dock or accessories.

From a materials handling standpoint, a one-story structure is preferable to a multi-story structure, except for certain process industries. One-story buildings generally afford more usable space per dollar of investment than any other, partly because of the space requirements of elevators. Furthermore, in a one-story building, relatively new types of roof construction with longer spans, arched and curved welded trusses, designed to support only the roof plus any snow load, offer economies in construction costs.

In multi-story buildings, elevators may also prove to be a bottleneck in the flow of materials. This can partially be avoided by determining the volume of material flow and planning installation of the required number of elevators with sufficient capacity and door openings to accommodate the loaded trucks.

Automatic systems of signaling and control help reduce truck delays at elevators. The time required for an elevator to respond to a call can be cut by installing the signal switches far enough in front of the trucking lines to enable truck operators to call in advance and by locating the elevator home station at a midpoint in the shaft.

Elevators bring up the question of floor strength. An approximate weight of trucks that may be operated safely on a given floor can be indicated by a simple study. Numerous tests by Yale & Towne's materials handling manufacturing divisions, made by using strain measurements on the structure and special test setups, show that industrial trucks impose a dynamic load

on the floor of about 25 per cent more than the static weight of the loaded truck.

Based on these data, a safety factor of 50 per cent over static load is advised in computations for dynamic floor loading. This means a safety factor of 1.5. However, it is only one of two factors to consider. An industrial truck exerts its weight for all intents and purposes on a single point. Although the load is actually spread over the wheelbase and the tread of the

tires, this is a relatively small area compared to the floor area. This concentrated load produces a bending moment approximately double that produced by a uniform load on the beam structure of the floor. In test, the bending stress actually was only increased 85 per cent so that a safety factor of 2 is more than ample.

Combining these two safety factors makes an over-all safety factor of 3 to 1 for stresses in the floor slab that are imposed by a truck that is in operation.

—From an address by LEO J. PANTAS (Works Manager, Salem Division, The Yale & Towne Manufacturing Co.) before the 5th Annual Meeting of the Society of Industrial Packaging and Materials Handling Engineers, Philadelphia.

A Survey of Water Use in Industry

WATER is one of the most abundant of natural resources. Yet, with such a tremendous supply, man has frequently been unable to use this resource to full advantage. The problem of water in our society has in recent years become the subject of much public discussion, largely due to the widely publicized water shortages in a number of heavily populated areas in the United States.

Industry is a heavy user of the nation's water resources. With the recent occurrence of serious water scarcities throughout the country, and the concern over water quality, the use of water by industry has properly become one of the major elements in determining a national water policy.

In the interest of making facts regarding water use by industry accessible to management and to the public, the NAM and The Conservation Foundation jointly have undertaken a survey of water use practices by the membership of NAM. Here are some of the results:

1. The few plants which use exceptionally large amounts of water account

for most of the aggregate industrial water use.

2. The increase in the scale of industrial operations over the past decade has led to an increase in the intake of water by industry. However, other important factors have affected the amount of water required by industry, including a change in water-use practices.

3. Large industrial plants increased their water intake, in the period 1939 to 1949, by a greater percentage than small plants.

4. While, in general, the most common source of water for industrial plants is the municipal river or lake water plants, the industrial plants which require very large amounts of water more commonly derive them from their own river or lake water plants.

5. The most important industrial requirement for water is for process purposes. Large amounts are also used for cooling, for sanitary and service purposes, and for boiler feed.

6. Industrial plants differ greatly among each other in the extent to

which they economize on water by re-using it. More than half the plants surveyed do not re-use any water. A substantial number re-use their intake as much as two or three times.

7. About half the respondents have their own facilities for treating water. Apparently the remainder either do not require water of a high degree of purity, or else obtain sufficiently pure water from municipal water systems.

8. About four out of five plants do not treat their waste water at all before discharge. A greater percentage of large plants than of small plants treat their waste water. Small plants usually

dispose of their waste water through municipal sewers. However, the plants with large amounts of waste water to dispose of most often use rivers for that purpose.

9. The users of exceptionally large amounts of water are fairly evenly distributed among the industrial metropolitan areas of the nation.

10. A great diversity of opinion exists among industrialists in most localities as to the potentialities for expanded use of water by industry in their areas. Industrialists in the New York area are relatively pessimistic on this question, while those in Chicago are relatively optimistic.

—*Water Use in Industry*. National Association of Manufacturers, 14 West 49th Street, New York 20, N. Y. 54 pages. Gratis.

How to Get Defense Subcontracts

A NINE-STEP PROGRAM for getting defense subcontracts was outlined recently by the Office of Small Business of the National Production Authority. The "helpful hints" listed by NPA and designed to aid companies in providing information to prime contractors are:

1. A party seeking a subcontract should first prepare a general description of his plant, facilities, and location.
2. Next, he should prepare a list of his equipment with brief descriptions of the type, kind, size and condition of machines.
3. A statement should be made as to how much machine capacity is available. It is well also to describe the products which are now being made or have been made in the past, and if possible, to tell the prime contractor whether plans are to continue and at what rate present products will continue to be made.
4. A potential subcontractor should tell the contractor what his capacity or source of new tools is—or would be.
5. Prime contractors should be told what kind of delivery facilities are available. Is a railroad siding near? Can shipment be made by air if required?
6. In selling services to a prime contractor, it would be wise to give a description of your organization and some information on your key personnel. Their experience may be a good selling point. Also include the number and kind of employees on your payroll, and any other pertinent information relating to your labor force and the available labor supply.
7. A prime contractor will want to know whether you maintain adequate cost records—records which would satisfy government requirements. Can these records be verified by government audit? Will you be prepared to give the government copies of your invoices to your prime contractor? Or invoices from your own suppliers?
8. Prime contractors are interested in the current financial ratings of those they are considering as subcontractors.
9. Be sure to relate your previous experience as a subcontractor if you acted as such previously. Give the names of companies for which you subcontracted and what you produced for them.

—*The Journal of Commerce* 1/12/51

Working with the Industrial Designer

JEAN O. REINECKE*

A RECENT SURVEY conducted by the American Management Association and the Society of Industrial Designers underlined the growing importance to American business of the industrial designer.

With more and more executives and engineers working with design consultants, there is need for a set of procedures to create the understanding that will assure maximum cooperation and achievement of goals. To get the most out of a relationship with an industrial designer, business men should follow a plan such as this:

First step should be the appointment of a design committee in the plant. This committee, composed of top representatives from all departments, may hire the design consultant. It works cooperatively with him, and should have authority to make decisions and determine actions.

The committee should help project objectives, giving the designer complete information. Time spent on this step at the beginning will save valuable man-hours later. No designer can deliver maximum results if he works in a vacuum.

The industrial designer selected should be qualified to deliver a design which can be mass-produced at minimum cost. He must be competent to design a product marketable to the greatest number of customers.

The designer is your product's doctor. He should be competent to

analyze, diagnose, and prescribe. His qualifications should be such that his recommendations do not reflect his personal whim, but rather the specific wants of your customers.

The restyling of your product is an opportunity to combine added function with increased eye and sales appeal. To this end, it is important that the values which the designer intended for the product be built in. The designer can assure this by supervising the final production drawings. He should have similar authority for new product designs.

When you have a design that looks good, insist that you get a mock-up, scale, or working model. This is the only sure way to judge production problems and plan advertising and sales promotion. Most design firms make their own models.

Finally, three important "don't" rules for working with an industrial designer:

1. Don't select a design because it happens to please *you*. The customer is the person you want to please and he should be constantly in the designer's mind.

2. Don't turn down a design as not workable without giving the designer a chance to prove its worth.

3. Don't reject a design because it presents production problems. You want to make products that will sell. If production changes are needed to raise profits, don't stand in their way.

* Reinecke Associates, Chicago

New Handling Savings Through Radio and Electric Trucks

USE OF two-way radio as an aid to mechanized materials handling is today saving American industry thousands of dollars and will save millions in years to come. One plant putting the idea to work is the new shipping center of Johnson & Johnson at Metuchen, N. J.

The J & J operation involves receiving goods from its production plants, moving them to reserve areas or the order picking floor, and to loading docks for ship-

ment to customers. Rail and highway transportation is used. Internal handling, except for a dragline operating in the order picking area, is by a fleet of seven Skylift electric fork trucks, 2,000-pound-capacity.

Two-way Motorola short wave radio sets were installed on each of the Skylifts. They are placed to the right of the driver's seat, and are easily accessible. All sets, plus the master station from which all orders emanate, are on the same frequency. Thus every driver hears all messages, and can better orient himself to the entire operation.

A master short wave station is located in central dispatching headquarters, which is both the voice and brain of the materials handling system. Included are a space layout chart and stock record location cards. The dispatcher knows where all merchandise is, can keep up to the minute on the positions of his fleet, and is able to shift trucks and goods with exceptional speed.

Deadhead loads, idle time, waiting for a pallet load, and general confusion, are eliminated. Another saving is in paperwork. In the past, assignments were worked out in advance, put on paper, and handed to the driver, who proceeded on his own from that point. With verbal orders, given one at a time, the paperwork is not needed.

When to Buy a New Machine

EQUIPMENT USERS LONG HAVE DREAMED of a simple machinery replacement formula. Now they have one.

It consists of a one-page work sheet which enables the user to do something he has never been able to do before. He can combine shop arithmetic with so-called "upstairs arithmetic" and arrive at a logical conclusion—whether or not the new machine should be bought.

Heretofore there were likely to be two different answers. The production man, using shop mathematics, computed the annual savings to be made production-wise. This figure was not the same as the one with which the financial men in the front office came up. For the latter dealt with depreciation and federal income taxes, among other factors, in figuring the profit to be gained from installing a new machine.

The new formula does, essentially in one operation, the job of checking each machine from two viewpoints—shop management and production management. It is explained in detail in a booklet recently distributed by the National Machine Tool Builders' Association (105 25 Carnegie Ave., Cleveland 6, Ohio) entitled *Computing Return on Invested Capital*. The worksheet is printed on the final page.

For the first time, worked out in black and white, the user now can see in dollars-and-cents detail the effect of new machine tools on his operations. Up to now he has not been able to measure accurately and quickly his potential profit from replacement of old machines by new ones.

There is no longer the need to rely upon the vague conclusion that a new machine "probably will save money." He knows whether it does—and how much.

First step in this new machine-tool arithmetic is to find out what the new machine will save in direct-labor costs. The next step is to evaluate all the factors, such as "fringe benefits," which must be considered in arriving at a true labor cost. The third, and final, step has to do with depreciation and federal income taxes.

That's all there is to it. The machine-tool user who progresses through these three simple steps, using the suggested worksheet, will come up with the annual net return on investment in new equipment.

Here is a simple, direct method of checking your machines. It is adaptable to every metal-working plant, large or small. Why not try it?

—BURNHAM FINNEY in *American Machinist* 2/6/50

Teamwork vs. Shortages

MOBILIZATION is barely under way, yet materials shortages are already biting hard at the heels of manufacturers. That's a new feature; in World War II, things didn't get tough for nearly a year. This time, in a matter of months, shortages are popping up; almost every material can be classed as critical.

To meet this problem, manufacturers have had to use new methods. In general, they have found the answer in teamwork. Fast-acting, quick-thinking departmental teams have been set up. These recommend changes as fast as the supply picture changes.

A recent *Business Week* survey shows that industry all over the country is facing up to shortages, mostly by the teamwork method. The changes called for by the teams are novel, reflecting the kaleidoscopic shifting of the supply situation. And it's clear that the changes of today will be gone again tomorrow. Materials policies are shifting back and forth.

Another top problem: When you switch materials, it invariably raises production costs. And that's not all. If shortages force you to limit production, your overhead stays at the old level, so your unit cost goes up.

Here's how different manufacturers are tackling the problem:

General Electric is in an unusually good position; its "Value Analysis" group was already functioning. Originally set up a couple of years back to

keep an eye on costs, this group is in an ideal spot to handle quick shifts in materials. It's acting as a sort of FBI for delving into substitute materials. The men in the Value Analysis team know materials, engineering, sales, factory planning. Their present—and difficult—goal is to maintain product quality and keep cost within reason.

In the case of one big electric range manufacturer, the substitution program planning is done by an inter-departmental group representing engineering, manufacturing, product-planning, and marketing. The marketing people are represented to keep an eye on product salability. This company says that every component of its products has been analyzed from the materials angle. Design is flexible enough for quick change; the changes, when possible, will be entirely "hidden," affecting neither appearance nor quality. But costs will rise.

Here are some of the ideas this company has ready to use: An aluminum reflector pan can be replaced by dark blue porcelain. Aluminized steel or bright steel strip can replace stainless steel banding. Copper can be saved by reducing the thickness of tubing walls. Cobaltless frits can be used for enameling.

Another midwestern outfit uses the one-man approach, with a top-flight engineer on the job. He travels around the various departments, looking for angles and advice. Final decisions are up to him.

—*Business Week*, December 30, 1950, p. 38:2.

ONE small plant found its eye-injury record running to six a month. So the manager called all foremen together, discussed the importance of safety and the seriousness of the firm's record, and asked the men to blindfold themselves during the rest of the meeting so they'd get the idea. At first, the men took it as a gag, he reports, but kidding soon stopped, and at the end of the meeting they all trooped out quietly. "And," he says, "... we haven't had a single eye injury since. . . ."

—*Factory Management and Maintenance* 9/50

Marketing Management

Today's "Must" Problems for the Sales Manager

THE TASK confronting sales managers today may be compared with that faced by the leaders of our Armed Forces after V-J Day. Sales managers are presented with both a challenge and an opportunity. The challenge is to make certain they are prepared to deal effectively with whatever sales problems may arise as a result of war disruptions. The opportunity is to tackle a number of long-term problems on a planned basis rarely possible under stress of normal competitive selling conditions.

In general, each sales manager will want to make sure his company has a program mapped out to deal with each of the following problems:

Planning for Sales Territory Adjustments: Mistakes in realigning sales territories can jeopardize relations with valued accounts, overload salesmen so they can't operate effectively, throw compensation out of line. A master plan for adjusting sales territories based on knowledge of number and location of all key accounts is needed.

Establishing a Sound Compensation Plan: Compensation plans should be reviewed carefully now to make certain they: (1) protect the company from run-away earnings; (2) provide control over salesmen's activities under any circumstances; (3) ensure salesmen sufficient earnings and incentive to keep them interested in the job under wartime conditions.

Maintaining Key Dealer Relations: The sales manager who wants to keep his company from losing dealer good will, which has taken many years to build, should be sure he knows how many and what type of sales contacts are actually required under war condi-

tions. He also should know the minimum number of salesmen required to do this contact job, and where they should be located. In addition, he should work out a revised sales presentation which will make it possible for salesmen to make calls even where they are unable to take orders for merchandise in short supply.

Maintaining an Effective Field Sales Staff: To minimize the effect of war-created conditions on sales staff efficiency, alert managements are revising recruiting and selection procedures to permit hiring of older men when younger replacements are unavailable. They are also providing for proper training of salesmen hired as replacements, even though they are to be employed only for the duration of the emergency.

Planning the Allocation of Production: The problem here is that many companies do not have really effective sales analysis systems which will tell them the number, location, and importance of their accounts. Also, few companies have analyzed the influence of shifts in population and buying power reflected in the recent Census on their sales potentials. Such deficiencies may not seriously hurt customer relations during a period when supply exceeds demand, since each outlet is able to obtain as much of a product as is needed to meet customer requirements. During a period of product shortage, however, this automatic safety valve does not operate. Only a judiciously administered allocation plan will maintain friendly relations with existing outlets.

Some Long-Term Projects: Streamlining of sales planning and control

methods and procedures; development of better sales potential and sales force work-load data; improvement of call report and trade analysis procedures;

studies of consumer buying habits and patterns of product use; appraisal of sales promotion and advertising methods.

—CHARLES W. SMITH *Sales Management*, Vol. 65, No. 7, p. 46:3.

Today's Packaging Picture

MOTHER'S HOME PERMANENTS, dad's cigarettes, sister's cosmetics, and a raft of food products may soon don their dull World War II wrappings again. That's the story being told by packaging experts of many big companies. Shortages of paper, cellophane, glass, metals, foil, glues and plastics are turning purchasing agents into substitute hunters.

Several cigarette and candy companies admit they plan to use plastic or paper substitutes for cellophane in wrapping their products next summer. The president of Drake Bakeries, Inc., reports that a number of bakeries already have stopped wrapping some items in cellophane in order to conserve their supplies for bread-wrapping. The research department of a shampoo and home permanent company is trying to develop a new plastic cap for its tubes and bottles to replace super-short metal ones.

The drabber packages ahead are only in small part due to military requirements, packaging men say. Up to now, demands of the armed forces have been trifling. Rather, it's the combination of whopping demand for a supply that's been limited by scare-buying, plus rapidly climbing prices, that's bringing on the change.

The most recent Department of Commerce figures—for the first nine months of 1950—show fabricated wares (dollar value) pouring from factories at a pace 13 per cent ahead of a year ago. Volume is 8 per cent above the like period of 1948, the year in which manufacturers' sales hit a record \$214 billion—roughly two and one-half times the 1939 level.

Production of packaging is way up, too. About twice as many glass containers, for example, will be turned out this year as in 1939. Output of metal cans is up about 65 per cent from that prewar year. Production of paper-board for boxes has almost doubled. Cellophane output, which was an estimated 125 to 130 million pounds in 1939, has also doubled.

—EUGENE J. SMITH in *The Wall Street Journal* 11/6/50

IN THE LAST DECADE, the number of trucks on U. S. highways has risen from 4,590,000 to 8,200,000. Since the trucks themselves have grown bigger, the amount of freight carried has risen even faster, from 51 billion ton-miles a year to 115 billion.

—Time 1/22/51

AMA NATIONAL PACKAGING CONFERENCE AND EXPOSITION

The American Management Association's 20th National Packaging Conference and Exposition will be held April 17-20, at the Auditorium, Atlantic City, N. J.

What Will Make Salesmanship a Profession?

DONALD A. LAIRD*

MANY leaders in the sales field believe that selling could be a profession, and would like it to become one. It is true that selling often pays much better than do many recognized professions; but, after all, racketeers make good money, too. Some sales-makers do conduct their work as if it were a profession, and it would be a boon to the field of selling if more were at the professional level.

What raises an occupation to professional heights? Is it earnings? Type of work? Public prestige? Or what?

There is a hint in the following list of professions which are recognized as a guide to eligibility for membership in an international association of people of various professions:

architects	journalists
actuaries	landscape architects
artists	lawyers
authors	librarians
actors	musicians
army officers	museum curators
clergymen	navy officers
chemists	pharmacists
certified public	physicians
accountants	physicists
dentists	researchers
economists	scientists
educators	social workers
engineers	

Sense of duty. Frank W. Abrams, chairman of the Standard Oil Company of New Jersey, told graduates of Northeastern University: "The hallmark of a profession is, above everything else, its sense of duty. None of the great professions is without a strong sense of responsibility to the community. Professional men do not work solely for themselves, but also for the good of mankind." Surgeons do not operate merely because they want the fee.

Motive of service. Henry S. Dennison, chairman of the Dennison Manufacturing Company, has said: "A professional combines science and com-

mon sense into an art, accompanied with a motive of service to others that is greater than the motive of service to self, and also having a loyalty to a code of ethics." The Better Business Bureau in New York City receives 50,000 complaints about sellers in an average year, which suggests that this requirement for a profession is ignored by many salesmen. When physicians or lawyers violate the code of ethics of their professions, they are ousted from membership and disbarred from future practice in the profession. Selling is perhaps still largely in the struggling period, trying to develop, and enforce, a code of ethics—though some firms, of course, are outstanding for the codes to which they and their salesmen adhere.

Service to both company and customer. Robert S. Wilson, the former school teacher who became sales vice president of the Goodyear Tire & Rubber Co., observed: "The professional salesman is emerging from the mists of our industrial age. The professional salesman is a man who is constantly studying to improve his efficiency. He is a man who serves both the company and the customer—his is a two-way relationship."

Preparation. That quotation highlights two important aspects of professionalism. Learning, study, preparation is one aspect. The professional knows more about something than does the average person—a great deal more. The recognized professions require a long period of training before one is allowed to practice. Salesmen who have only a grade school or high school education find that many people who have more formal education than they have, are unwilling to grant them professional status.

Keeping confidences. The other

* Dr. Laird's latest book, *Practical Business Psychology*, will be published by McGraw-Hill Book Company in late February.

aspect highlighted in Mr. Wilson's remarks arises from the two-way relationship which the salesman has to customer and company. The professional keeps the customer's secrets. The physician does not talk about John Jones' medical secrets. The attorney may be disbarred if he tells tales out of court which may harm his clients. Talking about customers behind their backs, making fun of customers' peculiarities violates professional ethics.

"Professional" athletes. The usual meanings of the terms "professional" and "amateur" are reversed in the field of athletics. The amateur athlete is not paid for his playing but has to conform to strict codes of sportsmanship which are enforced by various amateur athletic boards. In contrast, the professional athlete is paid, and his sportsmanship is regulated only moderately by "czars" or "commissioners" who try to police the sport and keep it honest. In athletics, money makes the difference between professional and amateur. In practically every other field, it is the code of conduct, preparation, sense of duty, and motive of service.

The professional salesman. Modern sales training is heading salesmanship toward professional status. Marshall Field & Company tells its retail sales people: "Selling is a profession—a profession for which an individual should prepare and at which he must constantly work if he expects to be successful."

A spokesman for Selfridge & Co., Ltd., observed: "We are glad that the skill and art of salesmanship are coming in for more and more recognition. We are glad the old theory that anyone was good enough to sell anything to anybody is disappearing, and that all the world is beginning to realize that in salesmanship there are as many grades of skill as there are in architecture, and that there is as great a difference between the amateur and the professional."

How long will it take to make salesmanship a profession? When the great majority of sales people sell according to professional standards, so that the public realizes it, then selling will be added to the list of the recognized professions.

An Advertising Plan for the Modest Budget

A WHEEL RUNS BEST when it is balanced, so does an advertising program. A complete and balanced program should be maintained regardless of business conditions. An adequate program for the modest budget should include:

1. A National Direct Mail Program, made up of:

a) Large Prospects—A mailing list of 6,000 to 8,000 major firms represented by 16 to 20 thousand individuals, the size depending on the budget. Material mailed to this list should be

of a high-level, personalized, executive type. The major firms buy at least 80 per cent of all industrial material and employ a large share of all labor. Winning just a few such accounts each year would more than balance the advertising cost.

b) Users—Maintain a customer mailing list, classified by size, type, and product purchased. Use mailings of the good will, service, reminder, and announcement types to keep in touch with these firms. They are your largest market for sales. If the budget is lim-

ited, send fewer pieces to the smaller accounts.

c) **Smaller Prospects—Reaching** these firms by mail should be the responsibility of each dealer or representative.

d) **Special Industries—At every opportunity**, launch special campaigns, using tailor-made mailing pieces, directed to the larger firms in a specialized group. This type of mailing calls for an application survey *before the campaign* and involves using a lead-getting, application type of material. It should be teamed up with a sales contest and a special promotion drive to cover the selected field thoroughly. Mailing lists can be purchased, or compiled as needed, but need not be maintained constantly. Such special drives would also include a trade paper campaign in the periodicals that serve the selected group.

2. A Publication Program as follows:

a) **Business Paper Schedule—Choose** one or two (more if budget permits) sound business publications and run a continuing series of small ads of the institutional type. Readership results can be tested by offering a booklet, but hot leads should not be sought, nor expected.

b) **Trade Publications Schedule—**Use small space in a number of publications. Rotate the ads and alternate between several publications to cover as many fields as possible.

3. **Sales Literature** should include: a loose-leaf catalog; booklet containing applications, product details, suggestions, and a check list of correct requirements and procedures; at least one sales presentation circular for the sales force showing the complete line, or its major elements.

4. **Directories:**

a) Telephone classified advertising should be inserted in all directories covering major markets, and include some trading areas where there is no representation.

b) Industrial directories should be a part of the program regardless of its size.

5. **Sales Promotion—This** includes contests, sales refresher courses, sales newsletters, schools, meetings, vital sales manuals, displays, shows, etc., that tie in with the advertising program. Of primary importance is the selling of the advertising program to the dealer and the salesmen for they must provide the final link to getting the order.

—A. E. JACKSON. *The Reporter of Direct Mail Advertising*, Vol. 13, No. 7, p. 15:3.

POINT-OF-SALE ROBOT: A new sound unit which can be set to transmit 40-word messages through one or more small speakers whenever a shopper approaches a product or display, goes through a doorway, or even sits down, may be a partial answer to every sales manager's dream. Recordings come in magazine form, last indefinitely, are loaded like camera film.

—*The Advertiser's Digest* 12/50

AMA MARKETING CONFERENCE

A conference of marketing executives will be held by the American Management Association on Monday and Tuesday, March 12-13, 1951, at The Waldorf-Astoria, New York.

Financial Management

New Techniques In Annual Reporting

TODAY many corporations are making changes in the form and content of their financial statements. The effort to bring understanding to the stockholder and general public is gaining momentum.

During the last few years many companies have adopted a new form of balance sheet, described as a "Statement of financial position or condition." This form may be called the narrative form of balance sheet. It starts with current assets, from which are deducted current liabilities. The other balance-sheet items then follow, and the final figure is described in some such term as "Excess of assets over liabilities." This is followed in turn by a statement setting forth details of capital invested in the enterprise, including accumulated earnings. This form is being used by both large and small firms, to show readers just why the figures in a balance sheet balance.

Many variations of this general form are being used. Some companies start the statement by listing the net assets and follow up with a statement of capitalization, then list assets. One firm, the Copperweld Steel Company, described this statement as "Net assets in which capital was invested," and followed it with a statement described as "Sources from which the net assets were obtained." This statement showed details of such matters as: capital stock; amount received for capital in excess of par value (paid-in surplus); net assets retained for use of the business; reserves for possible market decline in inventories and for contingencies; remainder (earned surplus). The Briggs Manufacturing Company used the phrase "Stockholders' investment"

at the head of its statement on capitalization. This was followed by the explanation: "This investment was used as follows"—with a list of the firm's assets and liabilities.

The objective in these statements seems to be the description of items as simply as possible in non-technical language. If details of balance-sheet items are felt to be necessary, the trend appears to be to show details in supplementary schedules rather than in the statement.

Instead of using the term "Current assets" in the balance sheet, several companies have used terminology such as "Cash and assets realizable in the ordinary course of business." Instead of using the term "Current liabilities," they have used such terms as "Amounts owed to others that must be paid promptly" or "Items payable in the ordinary course of business."

Another particularly gratifying trend is the showing of comparative figures for the prior year. There can be small question that inclusion of the prior year's figures with those of the current year gives the stockholder a clearer picture of the year's operations.

An innovation in the income statement has been the breakdown of cost of goods sold to show wages and salaries, social security taxes, pensions, and cost of purchased products.

The Outboard, Marine and Manufacturing Company preceded the item of income with the description "What we took in." Before the item of cost and expenses was the title, "What we did with it." Then the company listed the items:

 Paid for materials, supplies, and other
 operating expenses
 Provided for income taxes on portion of

such buildings, machinery and equipment allocated to operation

Local taxes

Interest on borrowed money

It then arrived at a total of operational costs before wages, salaries, etc. The total was followed by:

Wages paid to employees other than for supervision and management

Wages and salaries paid to supervisory and managerial employees

Paid for employee benefits: contributions to retirement plan; social security plan; vacations; etc.

This company also showed in comparative form the amount per dollar of sales income for each of the items for

the current year and also the previous year.

Another trend is the increased use of the combined statement of income and surplus. This statement has the merit of bringing the surplus account closer to the income account, and is particularly appropriate when there are charges or credits to surplus.

Various other trends in annual reporting are beginning to show the climate of the times. Companies are not only showing comparative figures with the preceding year but there seems to be a trend toward showing comparative figures over a period of five to ten years.

—JOHN B. INGLIS. *The Journal of Accountancy*, December, 1950, p. 474:5.

Financial Problems of Small Business: A Survey

A MAJOR PROBLEM confronts the American economy in the financing of small business enterprises. Flourishing small businesses are vital to the economy, and capital and efficient management are essential to their success.

The NAM recently surveyed its members to determine the financial problems facing small business today. Here are some highlights of the survey findings:

1. Significantly, nearly 73 per cent of the respondents held that the government had made no important contributions in financing small business. Slightly more than 15 per cent said the government had made a contribution through loans by the Reconstruction Finance Corporation and other government loans.

2. Thirty-seven per cent said the government could make a contribution by revising the tax laws so as to lessen the burden on small business and to encourage the flow of funds into small enterprises. If small concerns could re-

tain a larger part of their earnings in the business, it would lessen materially the shortage of venture capital.

3. Nearly 23 per cent said, "leave us alone, keep hands off business"; 22 per cent thought the government should improve its own financial and administrative operations and improve the labor laws; and only about 9 per cent suggested that the government should facilitate loans to business.

4. Only 12 per cent of the respondents were in immediate need of funds; 7 per cent said they had failed to obtain needed funds during the decade 1939-1949. Of those in need of funds, 39 per cent favored term loans, 28 per cent commercial loans, while 12 per cent thought funds could be obtained through the sale of common and preferred stock.

5. Forty-seven per cent of the respondents in need of funds wanted funds for working capital including inventories. Approximately 45 per cent were seeking funds for expansion of

fixed assets, modernization, and replacements. A small per cent needed funds for refinancing or retirement of old debts.

6. The most outstanding obstacles to obtaining commercial loans were: lack of capital funds, too large short-term debt, and large inventories. The obstacles to term loans were inadequate capital, business uncertainty, new company and large short-term debt. Inadequate capital, business uncertainty and new company were given as difficulties in securing funds through bond issues

and mortgages. While for stock issues, business uncertainty, new company and management were the most frequently mentioned obstacles.

7. More than 48 per cent of the respondents said the reason that funds are not available to small business is insufficient security; 11.3 said the terms (interest rates and maturity) were unsatisfactory; and almost 7 per cent regarded the amounts offered too small to meet their needs. Other reasons mentioned included government interference, demands for excessive guarantees, type of business, etc.

—*Financing Small Business*. National Association of Manufacturers, 14 West 49th Street, New York 20, N. Y. 46 pages. Gratis.

Decline in 1951 Profits Expected by Business

The defense program is not going to be profitable for industry, according to 178 manufacturing executives, surveyed in January by the Conference Board on the outlook for the first six months of 1951.

Most of the executives surveyed agreed that net profits will decline in 1951. Their reasons are of two kinds, "the certainties and the uncertainties." Among the certainties are: higher material and labor costs, more low-profit government orders, smaller margins on civilian business, and a larger tax bite. Most important of the uncertainties are: what's going to happen in the world, and the vagueness of American defense plans. So, despite an anticipated record output, American manufacturers expect substantially reduced net profits.

Although military orders have not been placed in substantial amounts as yet, a third of the cooperating companies report that it will be necessary for them to cut back on their shipments of civilian goods in 1951. Even though the survey indicates that plant expansions may reach an all-time peak in

early 1951, increased military orders and serious raw material shortages will reduce the goods available for the civilian economy.

Industrial production in the second half of 1950, the Board notes, approached the record output of the last war and many companies were operating at capacity. Expansion of manufacturing output in 1951, is, therefore, "largely dependent upon the construction of new plant facilities, improved tooling, and more efficient use of labor."

Capital expenditures, which were near peak levels at the end of last year, are expected to reach new highs in the early part of 1951, "providing there are no serious shortages of building materials and industrial equipment."

More than a third of the companies expect their operations in the first half of 1951 to equal those in the last half of 1950. Four out of 10 expect to put idle capacity to use or operate new facilities, and thus increase their over-all output. Only one in seven companies foresees a decline in production. These declines are expected to result from raw

material shortages, government controls, and market shrinkage induced by credit restrictions.

Over half the companies cooperating in the survey expect to either maintain or increase their rate of investment in new plant and equipment during the first half of 1951. The electrical machinery, heating and plumbing, instruments and controls, chemicals, papers,

and steel industries report the largest planned increase in capital expenditures. Only a handful of manufacturers expect their capital expenditures to decline. Some of these declines stem from insufficient funds, lack of potential markets, and inadequate returns on investments under anticipated conditions. Others merely reflect the completion of extensive postwar capital expansion programs.

Insurance Management

The Human Factor in Retirement

ONE of the fundamentals of our American philosophy is the right of the individual to make the most of himself according to his own abilities and ambitions, without restrictions because of race, color, or creed. Yet, if we look critically at the by-products of our productive efficiency—created largely by specialization and simplification of individual operations—it becomes obvious that many individuals cannot or sincerely believe they cannot, which is just as bad, advance themselves by doing a better job. Moreover, the routine nature of many types of work has tended to remove the sense of creative accomplishment. Thus, in one way or another, mass production methods have tended to remove satisfactions from the job itself. The artisan enjoyed what he was doing. Many people today do not enjoy their work.

At a recent panel discussion of this topic, one extremely competent union leader told a group of management representatives that the opportunities for advancement in his industry were almost entirely closed to the workers because of the technological skills needed by supervisors and executives. He went on to say, however, that

management should not feel sorry for the workers because they, and their union, knew what to do about it. They intended to see that the workers were paid enough money so that their children would not be faced with the same problem—they would be educated for higher jobs. He also implied that when satisfactions were missing from the job, the union could do much to furnish substitute satisfactions through its own activities.

But can management afford to abdicate in such a situation, and assume that union action is the best or only way to deal with the problem? Does not management have an obligation to face up to this situation and contribute to attaining better answers to the problems it creates?

Management has such an obligation. And one important area in which management currently has a big job to do is the area of pensions and retirements. A type of "rule-book thinking" apparently has become dominant in certain quarters. Because of it, age 65 has automatically been set as the age for retirement, despite the fact that strict application of this rule can produce some unfortunate effects for

the individual, for business, and for society.

It is generally recognized today by medical authorities that physical age is not a matter of calendar age. Some individuals age sooner than others; others age slowly. So the automatic retirement age keeps some people at work too long; retires others too soon.

Then again, pensions are almost always thought of in terms of dollar payments. Yet as the average age of our population increases, and as the time of starting employment is retarded by the need of more education, we may eventually get such a small portion of our population actually producing that there will be too little for the pension dollars to buy. Production, not dollars, is the only assurance of security.

This implies that retiring people at age 65—when they still have productive capacities—may be doubly dangerous: It can deprive the country of production which at some stage may be needed—and world events suggest that we may already be in such a stage. But, what is worse, automatic retirement completely neglects the human factor—the individual's strong desire to participate in decisions that will affect him and to be useful to himself and society.

Historically, compulsory retirement at age 65 was arrived at for reasons of administrative convenience in order to attain uniformity of application, to

avoid favoritism, and to have an easy and practical way of determining the time of retirement. The argument that this automatic retirement at a given age does in fact discriminate against workers who are capable and desirous of continuing at productive work can mean very little until we find out how to deal effectively with specific situations. The sweep of our industrial system into pensions—for executives as well as workers; our searching for security; the advances in the science of medicine which prolong useful life; all have produced problems that management today is not well-equipped to solve. Don't better ways have to be found to enable people to attain maximum happiness and security, and to realize the optimum productivity from our economy? Don't ways have to be found to base retirement, not on the calendar, but on better understanding of human beings? In this direction lies one of industry's most pressing problems. Management has done little so far to help people prepare themselves for retirement. Up to now, not much has been known about how to do so. There is, however, a very encouraging sign for the future in the growing science of gerontology. Out of the research in this field there is developing an increasing body of knowledge that promises to enable management to handle the area of pensions and retirement as truly a part of the human side of business.

—From an address by DONALD K. DAVID before the Industrial Hygiene Foundation, Pittsburgh, Penna.

AMA SPRING INSURANCE CONFERENCE

The Spring Insurance Conference of the American Management Association will be held on Monday and Tuesday, May 14-15, at the Hotel Statler, New York City.

Protection Against Special Fire Hazards

FIRE hazards identified with industry are generally classified as either common hazards—like smoking, house-keeping, electrical, fuel handling, welding, soldering, etc., or special hazards—those inherent to process. Explosion hazards may rightfully be included in this latter classification.

Protection for most raw stock not only contemplates technique in handling and arrangement of storage in a manner that minimizes the possibility of fire starting, but also adequate protection by fixed fire extinguishing equipment, such as automatic sprinklers, and maximum accessibility to public fire services.

Though the trend toward mechanized handling, using industrial lift trucks and stackers, may have become economically necessary, the resulting high piling of combustible stocks into areas not particularly adapted for such storage has seriously complicated the problem of providing adequate protection. Special protection is needed for these hazardous raw stocks including confining dikes for tank farms, fixed foam, water spray, carbon dioxide or inert gas as conditions may require, with effective protection against lightning and static. Enforcement of rules against use of open flames, smoking and unprotected electrical equipment is vital.

Demands upon industry to produce better products in greater quantities,

faster—yet cheaper—have resulted generally in proportionate increases in the fire and explosion perils associated with individual processes. For example, in the application of finishes to metals, papers, textiles, etc., the speed of conveyors has been stepped up; the use of faster drying, lower flashpoint solvents has increased; the use of high voltage electrostatic spray equipment has found wide acceptance; electric, gas and infra-red drying has been added; operating temperatures in conventional ovens have been stepped up; high frequency drying is occasionally involved; and process requirements in some cases necessitate operating in an atmosphere well above the explosive range.

Much which has been said above about the storage and protection of raw stocks holds for finished goods. Plans should be made to permit complete unobstructed protection by the sprinkler system (or other suitable fixed protection) and to make possible maximum fire fighting efficiency of the public fire department.

Plant management would find it beneficial to study carefully the flow of hazardous stocks from time of arrival to the shipping dock to make sure that step by step through the plant these stocks are afforded complete and effective protection. It is only in this manner that the hazards to which such stocks may be exposed, necessarily or otherwise, shall not interrupt the continuity of production.

—The Sentinel (Factory Insurance Association, Hartford, Conn.).

Some Highlights on Fraud

STUDIES involving 100 cases of fraud in business and industry, recently conducted by Price, Waterhouse Company, New York, have produced find-

ings that should be of interest and value to management.

Analysis as between cases involving cash receipts, cash disbursements, and

theft of inventories, securities and other assets showed:

	Number	Average. Amount	Total Amount
Receipts	56	\$ 19,336	\$1,082,815
Disbursements ..	44	130,522	5,741,970
Other	7	38,857	272,000
	107*	\$ 70,968	\$7,096,785

* Both receipts and disbursements were involved in 7 cases.

These statistics warrant careful consideration. While over half the cases involved manipulation of cash receipts as compared with slightly over 40 per cent for cash disbursements, the amount diverted through disbursements was over five times that lost through misappropriation of receipts. An average of \$19,000 was lost in each diversion of receipts; an average of \$130,000 was involved in each manipulation of disbursements.

Thirty of the hundred frauds occurred in company branches, and these averaged about \$23,900.

In 29 of the 56 frauds in cash receipts, the composition of the deposit made in the bank differed from the items entered in the cash book. This is a common and well-known situation,

yet despite the attention being given it by auditors and management, it is still widely and successfully used.

Management could be given a greater opportunity to discover frauds, if company transactions could be separated to the point where someone in the managerial group has responsibility for and knowledge of each. The person responsible should have the accounting results of the operations he supervises. He will thus be in a position to spot trouble when results differ from what he knows they should be.

If checks are allowed to be cashed for customers or employees out of currency receipts, a dishonest person might insert a check payable to the company and extract an equal amount of currency. If checks must be cashed, let it be from a separate fund provided for the purpose, and they should not be made payable to the company. Checks should be mailed directly to the payee as soon as they are signed. Moreover, responsibility for determining the account chargeable for disbursements must be done objectively and independently of those authorizing the disbursement.

—From an address by HERMAN W. BEVIS before the Institute of Internal Auditors, Inc., Toronto (Canada) Chapter (as reprinted in *Business Management*, Vol. 18, No. 11).

Insurance Problems in Atomic Energy Use

DURING the past few years the use of radioactive materials and sources of nuclear radiations have increased tremendously. The "peaceful atom" is apparently definitely here to stay, and nuclear energy with its vast potentialities is rapidly assuming a place of prominence among the numerous postwar industrial innovations. As is true in the case of many other industrial innovations, new problems are introduced, and these must be recognized early and appraised from the standpoint of the

casualty insurance coverages involved.

In order to highlight some of the casualty insurance problems of atomic energy usage, from a purely practical layman's viewpoint, it might be well to review briefly some of the coverages which may be affected immediately: (1) workmen's compensation, (2) public liability, (3) products liability, and (4) boiler and machinery.

Unlike accidental injury, radiation illness usually cannot be isolated as to a specific time, place, or event. Fur-

thermore, man's senses of seeing, hearing, feeling, etc., are not capable of warning him of the inherent hazards of nuclear energy. Ingenious radiation detection instruments must of necessity be relied upon to alert him to these dangers.

In some states, compensation for occupational diseases has been provided by broad definitions or merely by including such diseases within the term accident or injury, without definition. Although it is likely that diseases due to radioactivity would be included within these broad coverage laws, specific listing in a schedule would remove doubt on this point.

Occupational diseases are often contracted gradually. This is particularly true of radiation illness, as well as the so-called dust diseases, silicosis and asbestosis. It usually takes many years for these diseases to develop to a degree sufficient to cause disability. Thus when a law is enacted making them compensable, an undue burden may be placed upon industries in which the uncontrolled hazards causing these diseases are present. Many employees are in a position to make claims based on exposure long prior to the effective date of the law, during which time no reserves were set aside. To avoid dangerous dislocations among such industries, a number of states have provided for graduated benefits for dust diseases, the amount of compensation depending upon the lapse of time between the effective date of the act, and the date of disability or death. Further consideration of these aspects of the radiation problem may well be worth while.

More important than compensation, however, is prevention of these diseases. Fortunately there has been accumulated and made readily available in recent years a great deal of valuable information regarding the specialized problems of protecting personnel in the industrial use of atomic energy.

To assess adequately the relative importance of the problems of protection

from radiation, it might be helpful to review briefly the properties of the various types of radiation involved and attempt to outline the type of shielding required. In general the recognized differences in the types of radiation lie in the penetrating power of the various types. From present knowledge, based upon animal experimentation, it may be said that these radiations produce no circulating toxins or substances detrimental to cell growth. It is generally felt that the action of these radiations probably causes cessation of, or abnormal, mitosis (cell division) with subsequent death or sterility of the daughter cells. The more obvious effects of high dosage are burns of the skin, loss of hair and the formation of cataracts in the lens of the eye.

There are four generally accepted methods by which external radiation hazards may be reduced: (1) remote-controlled manipulation or handling; (2) increased distance from source; (3) decreased time of exposure; (4) increased shielding.

The experience so far has shown that protective measures, particularly those designed to safeguard personnel from radioactivity, achieve their ultimate purposes only under continuous supervision by individuals specifically trained to understand the nature of the problems. Every employee should be instructed with regard to the type of hazards involved. Housekeeping must include not only general neatness but also periodic routine surveys to detect radioactive contamination.

One of the major problems confronting the field of public liability coverage is that of radioactive waste disposal. If improperly disposed of, stack effluents, solid wastes, and sewage, both liquid and solid, will set up a chain reaction of public liability damage claims beyond our wildest expectations.

The recent interesting vehicle accident in the state of New Mexico involving a runaway lumber truck and an Atomic Energy Commission convoy

underlines another form of public liability potential. The appearance of crews after the crash, garbed in rubber suits and equipped with Geiger counters, led some people to speculate that the accident scene, including a courthouse and school, might have to be sealed off. As a result of the crash, the Atomic Energy Commission is being pushed to build a by-pass, at an approximate cost of \$6,000,000, around the right of way provided by the state.

An interesting products liability problem may arise from the shipping of improperly packaged beta-ray thickness gauges, which may be warehoused or handled in close proximity with unshielded photographic films. The pos-

sible allergic or other dermatitis effects due to retained uranium oxide in textiles dyed by the new fast-fixing dyeing process opens up another unexplored reservoir of products liability claims.

A difficult problem to adjudicate under boiler and machinery coverages can be presented by radioactive contamination of boiler tubes and other accessories, caused by contact with radioactive contaminants picked up by boiler feedwater. The contamination of machinery and equipment, due to the failure or breakdown of inadequately shielded radioactive processes within close proximity, offers further food for thought in considering boiler and machinery coverage possibilities.

-J. DEWEY DORSETT. *Industrial and Safety Problems of Nuclear Technology* (Ed. by Morris H. Shamos and Sydney G. Roth), Harper & Brothers, New York, 1950. 363 pages. \$4.00.

Survey of Books for Executives

AN ADMINISTRATIVE COMPENDIUM

ADMINISTRATION—THE ART AND SCIENCE OF ORGANIZATION AND MANAGEMENT. By Albert Lepawsky. Alfred A. Knopf, Inc., New York, 1949. 699 pages. \$6.50.

Reviewed by L. Urwick

In the days of Queen Victoria, no British middle-class family could count its household complete without a Compendium of Indoor Games. In a case of mahogany or of a less dignified wood, chastely draped in leatherette, would be found the materials for chess and draughts and halma, backgammon, ludo, and snakes and ladders, cribbage, happy families and the race game, solitaire, spellikins and tiddley-winks—but the list is inexhaustible. Some of the finer and more complex outfits provided for more than 200 games. So, at the regular hour in each afternoon when the young were scrubbed and dressed up, exiled from the natural life of the nursery, and committed to the strange and often strained atmosphere of the drawing room, there was an almost infinite variety of healthy amusements which could be used to

distract their attention from the fact that their parents were incapable of communicating with them.

It is difficult, at all events for this reviewer, to read through this latest monumental work on the subject of Administration without thinking of that analogy. Professor Lepawsky, who is in charge of Public Administration at the University of Alabama, has confessed and quite frankly put together not a book about administration, but a most extensive and closely studied collection of readings on the subject. "Regardless," he writes, "of the name or nature of this supposedly new science, it is an art and technique which reaches far back into the experience of civilized man. For this reason we include in this book ideas about administration presented by many authorities ranging from Aristotle and Socrates to Wilson and Stalin." He adds that "the material has been compiled in its present form solely because over a period of fifteen years of teaching and practice in the field of administration, I have found it effective in clarifying an otherwise intricate subject."

So he puts his compendium together with extracts from over 300 sources arranged in 20 sections grouped in three main parts. The Art of Administration discusses functions, policy, history, American and comparative experience and bureaucracy. The Science of Organization covers this vital field in six sections and with unusual breadth of attack. The Technique of Management covers what the President's Committee on Administrative Management called "the central executive functions"—personnel, finance, and planning. These are supplemented by sections on various procedures and practices—research, reporting, public relations, and legal in particular. The volume is introduced by a section on The Significance of Administration and is rounded off by a discussion of The Study of Administration.

Much in this book is refreshing and valuable. It is important to have a volume on management which quotes copiously from the Chinese, the Egyptians, the Greeks, and the Romans. It is a corrective to that hubris which is one of the earliest symptoms of the corruption of power. On the whole, the extracts are well chosen and helpful in illustrating the points under discussion. It is a thoroughly useful collection, which will save many future students the pain of quarrying for themselves. There are, as is perhaps inevitable, some omissions which seem curious. It would have been impossible to write a book of this description in Great Britain and leave out the Utilitarians almost completely. There is nothing from Hobbes, Locke or Bentham, nothing from the British economists Adam Smith, John Stuart Mill, or Alfred Marshall, only a passing reference to the Webbs. Turning to American sources, this reviewer was surprised to find only a single quotation—on centralization and decentralization—drawn from the work of David Lilienthal.

The weakness of the form adopted is that it makes it impossible for the compiler to link together the various extracts with original paragraphs which are equal to the task of imposing unity on the whole. Thus the volume remains a patchwork of extracts: It never really comes together, becomes integrated. Professor Lepawsky appears to have felt that his responsibility as editor-author was discharged in selecting a reasonable pattern, choosing pertinent passages, and presenting them with introductions as impersonal as the toastmaster's patter at a city dinner. It may be doubted whether a member of the teaching profession does in fact discharge his re-

sponsibility to the community in doing just that. If he publishes a book at all, surely he has an obligation to adduce evidence of inspiration as well as of perspiration. The reader should put it down feeling that he has been talking to another mind, not listening to a super brain trust on the radio. And yet, to make this point may perhaps deter people from buying the book, to their disadvantage. For it is certainly a first-class anthology of documents about administration: this reviewer knows no other book quite like it.

For a work of this dignity and authority, there are some curious minor mistakes and one major misstatement. For instance, F. B. Gilbreth invented the term *therblig* to describe an element in a cycle of operations: the word is, of course the name Gilbreth spelled backwards. In this book, it occurs as *therbig*, which is presumably not a printer's error since the rendering occurs seven times in three pages.

On page 253, we learn that Urwick's use of Mooney's logical table "is typical of the inbreeding of ideas in this field. For his convenient triad-type combination of organizational principles, Mooney cites Urwick as his authority (apart from his citation of the mediaeval mystic, Dionysius the Areopagite); and Urwick cites Mooney." Now this is surely misleading. Mooney's book is in three editions: The first, under the title *Onward Industry*, was published in 1931. The second and much abbreviated edition appeared in 1939; the third and even shorter version in 1947—the last two under the title *The Principles of Organization*. In all three editions, Mooney specifically quotes Louis F. Anderson, "Das Logische Seine Gesetze und Kategorien," as the authority for the logical scheme which he adopted (1st Edn., p. 543; 2nd Edn., p. 46; 3rd Edn., p. 46). This reviewer was much struck with the use of this logical table as a means of correlating principles. In order to test Mooney's conclusions, he took Henri Fayol's six aspects of administration, and his empirical lists of principles and administrative duties and arranged them in similar tables. He found that there were in Fayol items exactly corresponding to the nine items in Mooney's table of the principles of organization. In addition, Fayol's remaining items could be arranged in two further tables—one a general statement of the Principles of Administration and the other a table of the Principles of Command and Control. It was only necessary to achieve this result to add a single principle not found in Fayol's lists but implicit throughout his work, namely,

the principle of Investigation. It seemed remarkable that Fayol and Mooney, who had no knowledge of each other's work whatever, should have produced results which corresponded so closely. It also appeared that Fayol's empirical lists were more logical and self-consistent than Fayol himself has suspected. These findings were published in an article in *Papers in the Science of Administration*, which appeared in June, 1937. It is to this paper which Mooney refers in his 1939 and 1947 editions. It is thus no question of Mooney and Urwick citing each other as authorities, but of the remarkable mutual correspondence of Mooney and Henri Fayol to which Urwick called attention. Whether

Anderson's logical device which Urwick borrowed for use in his *Elements of Administration* is the most desirable device in logic is a secondary question. This reviewer feels that an attempt to correlate principles is at least a step in the right direction—a vast improvement on empirical lists.

Despite these irritating defects, Professor Lepawsky has done a very useful job. Presumably he wanted his students to do their thinking for themselves rather than to inflict his own ideas upon them. And, provided the interpolated paragraphs are read in this spirit, the collection of documents is a valuable one. Administration is a catholic subject and, in this respect, it is treated with the breadth and dignity it deserves.

BUSINESS CONSULTANTS: Their Uses and Limitations. Controllershship Foundation, Inc., 1 East 42nd St., New York 17, N. Y. 32 pages. \$3.00.

Rules to follow when selecting a business consultant together with safeguards and procedures for insuring satisfactory results are presented in this report. Based on the experience of 61 representative companies located in 25 cities, the study defines the ethical tenets which should govern the consultant's dealings with management. It describes the various bases on which consultants work, and provides standards to apply when judging their success.

Pointing out that some 1,300 consulting firms offer their services to management in this sphere, the report cites several criteria for selecting the right company or individual to do a particular consulting job.

The consultant seeking an assignment, the report advises, should observe certain ethical standards, such as an honest presentation of his skills, experience, and staff; a willingness to decline a job for which he is not fitted; complete protection of the company's confidential information; the right kind of human relations with the company's employees, and so on.

Emphasizing that pre-planning by management helps prepare the way for a successful assignment, the authors advise:

"Before any work is done, there should be a mutually acceptable definition of the

problem; an agreement on the estimated cost of the work to the company; a rough time table of performance for the consultant, and, if possible, a statement of the foreseeable benefits accruing to the company from the consultant's work.

"We believe that many of the unsuccessful consulting experiences studied in the field can be attributed, at least in part, to the lack of a clear preliminary understanding."

The company can contribute in several ways to the success of the assignment, the study points out, by thoroughly and honestly briefing the consultant; by delegating some executive or group of executives to work with him; by furnishing the consultant with sufficient company staff; by seeing that his recommendations are properly implemented; by according him the required amount of executives' time; by understanding the need for a lapse of time between the assignment of the problem and the fruition of results; and by creating an atmosphere of cooperation.

Nine tests for judging the value of results are given, among them: Were the recommendations usable, specific, applicable to the company, and economical to implement? After a reasonable period, are they still in effect and useful? Was the assignment carried out with a minimum of disruption in the organization? Did the company receive new ideas from the contact? Was the job done within the original time and cost estimates?

In connection with payment for consulting

services, the report finds that three methods are in use: per diem, lump-sum, and retainer. The per diem fee, the most commonly used basis, ranges from \$50 to \$150 per day per man (occasionally higher) depending upon the experience and reputation of the individual and the firm of which he is a member. When per diem is used, the total cost of the assignment depends upon the number of men involved and the length of time spent on the job. The study found the lump-sum method of payment to be most typical for an exploratory study by the consultant to ascertain the nature and scope of the problem under consideration. These surveys were

usually of short duration, sometimes only two or three days, and therefore the cost ran only to a few hundred dollars. However, some exploratory surveys were found whose cost was as high as \$10,000. A consultant's retainer fee runs in the neighborhood of \$150 to \$250 per month (and occasionally higher) and is employed by those companies desiring a continuing relationship with the consultant. This method of payment is the same as that used by many companies to remunerate their legal counsel.

The study closes with specimen agreements between consultant and client.

Briefer Book Notes

(Please order books directly from publishers)

General Management

MANAGEMENT ACCOUNTING: Report of a Specialist Team Which Visited the United States of America in 1950. Anglo-American Council on Productivity, 2 Park Avenue, New York, N. Y., 1950. 71 pages. Gratis. This report presents the observations of a team of British accounts who visited America under the auspices of the Anglo-American Council on Productivity to find out what accounting, costing and statistical information is provided for American management at different levels, by what methods it is obtained, and how it is used. In carrying out this assignment, the team visited American plants and business offices, trade associations, and schools of business administration. The result is a highly interesting series of observations on the methods and operating principles which the team found to be in effect in American industry and which it considers contributing factors to our production efficiency. The report is far broader than its title might suggest, covering as it does methods and principles relating to top management organization and control, design and manufacture, sales management, costing, financial accounting, purchasing and stock control, office management, and the use of business statistics. Executives in all branches of business management will find it of interest for its reflections on American methods, as others see them.

INDIVIDUAL INITIATIVE IN BUSINESS. Edited by George Howard Allen. Harvard University Press, Cambridge, Mass., 1950. 255 pages. \$2.50. The proceedings of a series of business conferences at the Harvard Graduate School of Business on the philosophy underlying individual initiative and its practical expression in American business. Those represented include Charles R. Hook, Meyer Kestnbaum, Roy E. Larsen, Charles Sawyer, Clinton S. Golden, George W. Brooks, Charles A. Myers, Peter Drucker, Fritz J. Roethlisberger, and L. R. Boulware.

INDUSTRIAL AND SAFETY PROBLEMS OF NUCLEAR TECHNOLOGY. Edited by Morris H. Shamos and Sidney G. Roth. Harper & Brothers, Inc., New York, 1950. 368 pages. \$4.00. Specifically concerned with non-military uses of atomic energy, this volume brings together the work of 19 leaders in the field of industrial development, nuclear research, radiation medicine, and casualty insurance. The authors' discussions of the applications of atomic energy to industry, agriculture, technology and medicine in general, and of the problems connected with such uses, will be of interest to the general business reader and especially to those in the engineering and insurance fields.

THE STOCK MARKET. By George L. Leffler. The Ronald Press Company, New York, 1951. 580 pages. \$6.00. A comprehensive and up-to-date review of the operations and functions of the stock market under current conditions. Describes in details the market and the exchange which have developed with the advent of the Securities and Exchange Act, the reorganization of the exchanges, and the widespread changes in trading practice and procedures. A clearly written and helpful guide to all aspects of stock market operation.

COMMITTEES AND CONFERENCES: *How to Lead Them.* By William E. Utterback. Rinehart & Company, Inc., New York, 1950. 248 pages. \$3.25. Explains the basic principles of leading committees and running conferences successfully, with emphasis on methods for stimulating discussion and encouraging conferees to think and to express themselves publicly.

THE PRUDENTIAL: *A Story of Human Security.* By Earl Chapin May and Will Oursler. Doubleday & Company, Inc., Garden City, New York, 1950. 372 pages. \$5.00. A highly readable biography of one of the world's most prominent life insurance companies, from the early struggle of its founders to its present status as a financial institution affecting the lives of millions of families.

Personnel Management

THE AGED AND SOCIETY: *A Symposium on the Problems of an Aging Population.* Industrial Relations Research Association, 704 South Sixth Street, Champaign, Illinois, 1950. 237 pages. \$3.00. A collection of papers by a distinguished group of authorities on the changing age distribution of our society, the social, personal, medical and economic problems of the aging, and the employability of the older worker. Authors include Otto Pollak, J. Douglas Brown, Solomon Barkin, Elon H. Moore, Sumner H. Slichter, and Edwin E. Witte.

THE FILM BOOK FOR BUSINESS, EDUCATION, AND INDUSTRY. By William H. Wilson and Kenneth B. Haas. Prentice-Hall, Inc., New York, 1950. 259 pages. \$4.65. Explains the effective use of motion pictures and slide films and their application to business, educational and industrial training and communication problems. This helpful manual contains much practical, how-to-do-it material on film script preparation, film techniques, cost factors, functions of professional film-production personnel, sound recording, projection techniques and equipment and other important aspects of the preparation and use of films.

PUBLIC PERSONNEL ADMINISTRATION. Third Edition. By William E. Mosher, J. Donald Kingsley and O. Glenn Stahl. Harper & Brothers, New York, 1950. 652 pages. \$6.50. The revised edition of this standard work on personnel practices in all branches of public service—federal, state and local—includes an expanded treatment of the human factor in administration, employee organization, staff development and training, and an entirely new section on personnel administration in the international organization.

Production Management

HOW TO CHART TIMESTUDY DATA. By Phil Carroll. McGraw-Hill Book Company, New York, 1950. 323 pages. \$5.00. A complete manual for industrial engineers and shop executives who wish to understand fully the fundamentals and methods of charting timestudy data and thus expand the productivity of the timestudy dollar. The step-by-step descriptions and illustrations will enable the reader to make most types of charts and will help him solve everyday timestudy problems. Each of the six different forms of construction is covered by a step-by-step set of illustrations, and the general conditions for the use of each are pointed up. Throughout, an attempt is made to show how to reduce the cost per standard, and emphasis placed upon extension of wage incentive application. Notable for its lucid presentation and for its original and practical ideas.

PRODUCTION PLANNING AND CONTROL. By Thomas M. Landy. McGraw-Hill Book Company, New York, 1950. 436 pages. \$5.50. Presents the fundamental principles and laws that govern the various phases of production planning and control, with a detailed analysis of the various functions directly and indirectly necessary for efficient production operations. A comprehensive and authoritative guide.

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Program Synopsis

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